

APPENDIX K
PHASE 1B CULTURAL RESOURCES
RECONNAISSANCE SURVEY

**PHASE IB CULTURAL RESOURCES RECONNAISSANCE
SURVEY OF THE PROPOSED CABELA'S DEVELOPMENT
PROJECT WITHIN RENTSCHLER FIELD IN
EAST HARTFORD, CONNECTICUT**

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Air Museum volunteers, provided valuable insights into the former use of Rentschler Field and its association with the Pratt & Whitney Company. Finally, we also would like to thank Mr. Vernon Coffin, Mr. David Cook, and Mr. Herb Shook. As former Pratt & Whitney employees, they offered unique insights into the day-to-day operations of the Pratt & Whitney Company and its associated aviation facility, especially with respect to changes in the project area landscape throughout the latter half of the twentieth century.

ABSTRACT

This report presents the results of a Phase I cultural resources reconnaissance survey of the proposed Cabela's Development Project within Rentschler Field in East Hartford, Connecticut. Field investigations for this project, performed on behalf of Baystate Environmental Consultants, Inc., and the Department of Economic and Community Development, were completed by Heritage Consultants, LLC during May of 2006. The current investigation was completed in order to comply with Section 106 of the National Historic Preservation Act and stipulations outlined in the Connecticut Environmental Policy Act. This undertaking entailed pedestrian survey, systematic subsurface testing, mapping and photo-documentation of the "archaeologically sensitive" portions of the proposed project parcel; these areas were previously identified by Archaeological and Historical Services, Inc., during a Phase IA cultural resources assessment survey of the Rentschler Field area. During the current investigation, 173 of 179 (97 percent) planned shovel tests were excavated throughout the "archaeologically sensitive" portions of the Area of Potential effect. A total of 4 non-site cultural resources loci were recorded as a result. All four of these non-site loci produced historic period artifacts; however, none of them was deemed to retain research potential. Thus, all four non-site loci were assessed as not

significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of these loci or the proposed project parcel is recommended. However, the proposed project parcel is situated within the limits of Rentschler Field, which Heritage Consultants, LLC determined to be a significant historic resource because of its role in our nation's aviation history and because of its association with Frederick Rentschler, who made significant contributions to the aviation industry. Thus, Rentschler Field itself was deemed a significant cultural resource as defined by criteria A and B of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is the professional opinion of Heritage Consultants, LLC that an appropriate method(s) of mitigating the impacts to this important cultural resource should be considered. Appropriate mitigation strategies include, but may not necessarily be limited to, the production of a public history booklet about Frederick Rentschler, Rentschler Field, and the growth of the Aviation Industry and/or the creation of an informative kiosk within Cabela's that combines the developer's spirit of exploration with the past use of the project parcel. These two of mitigative strategies, as well as any others that are appropriate, should be considered in consultation with the Connecticut State Historic Preservation Office.

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CHAPTER I

INTRODUCTION

This document presents the results of a Phase I cultural resources reconnaissance survey of a parcel of land within Rentschler Field that is associated with the proposed Cabela's Development Project in East Hartford, Connecticut. Heritage Consultants, LLC, completed this investigation on behalf of Baystate Environmental Consultants, Inc., and the Connecticut Department of Economic and Community Development during May of 2006. All fieldwork was performed in accordance with the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; the Connecticut Environmental Policy Act, and; the *Environmental Review Primer for Connecticut's Archaeological Resources* promulgated by the Connecticut Historic Commission, State Historic Preservation Office (Poirier 1987).

Project Description and Methods

The proposed development area, which will be the site of Cabelas Outdoor Outfitters, is located within the confines of Rentschler Field and Pratt & Whitney properties in East Hartford, Connecticut. The currently proposed project area consists of a large parcel of open land, of which 28.6 ac were characterized as "archaeologically sensitive areas" by Archaeological and Historical Services, Inc., during two previously completed Phase IA cultural resources assessment surveys of the Rentschler Field area (Forrest et al. 2006). As a result of those investigations, portions of the currently proposed development parcel were described as containing, "substantial areas of intact archaeologically sensitive soils" (Forrest et al. 2006:45). These soils were delineated on project area maps and recommended for additional Phase IB investigations. The current investigation examined these areas, which are

located adjacent to the runways and taxiways of Rentschler Field, to the west of Rentschler Stadium, and at the intersection of the entrance to Pratt & Whitney and Silver Lane (Figures 1 and 2). As depicted in Figures 3 through 7, the survey areas are located within open, flat land characterized by manicured lawns, open patches of dirt, and/or tall grasses and shrubs.

Prior to initiating the Phase IB cultural resources reconnaissance survey for this project, Heritage Consultants, LLC presented the testing strategy described in this document to Dr. David Poirier, Staff Archaeologist of the Connecticut State Historic Preservation Office for review and approval. Survey methodologies employed during the current investigation were designed to sample the "archaeologically sensitive areas" described above in an effort to determine whether or not intact cultural deposits were present.

Background research for this project included analysis of available historic maps and aerial imagery depicting Rentschler Field and the surrounding area; an examination of pertinent USGS topographic quadrangles; examination of previously completed archaeological investigations in the project vicinity; and a review of archeological data maintained by the Connecticut State Historic Preservation Office and digital records archived by Heritage Consultants, LLC. The intent of this review was to identify previously recorded cultural resources situated within the vicinity of the proposed project area. This information was used to further develop the archeological, environmental, and stratigraphic context of Rentschler Field, as well as for assessing any cultural resources that may be identified during survey. This information also was used to design survey methods and techniques appropriate for

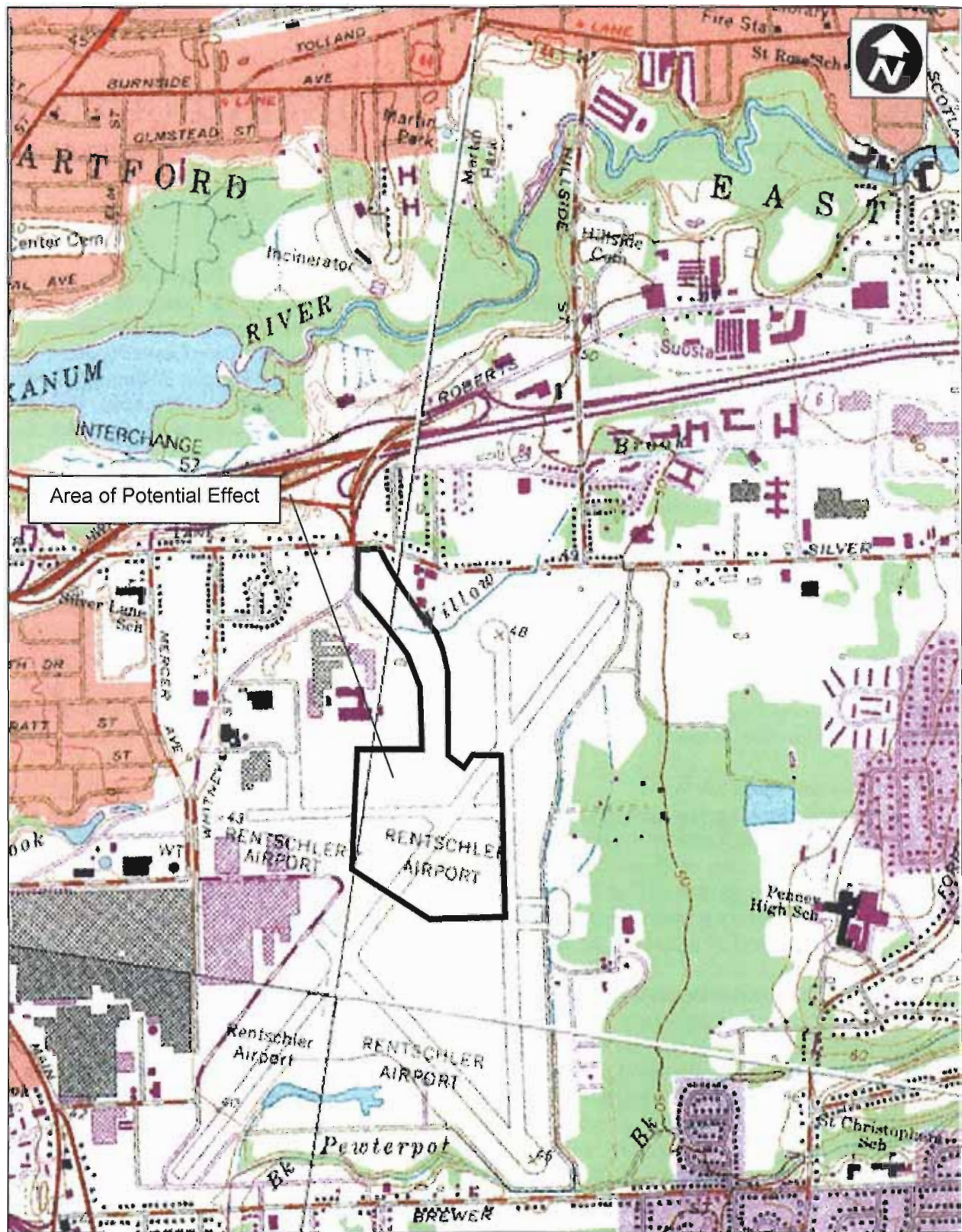


Figure 1. Excerpt from the 1989 USGS 7.5' series topographic quadrangle depicting the location of the Area of Potential Effect.

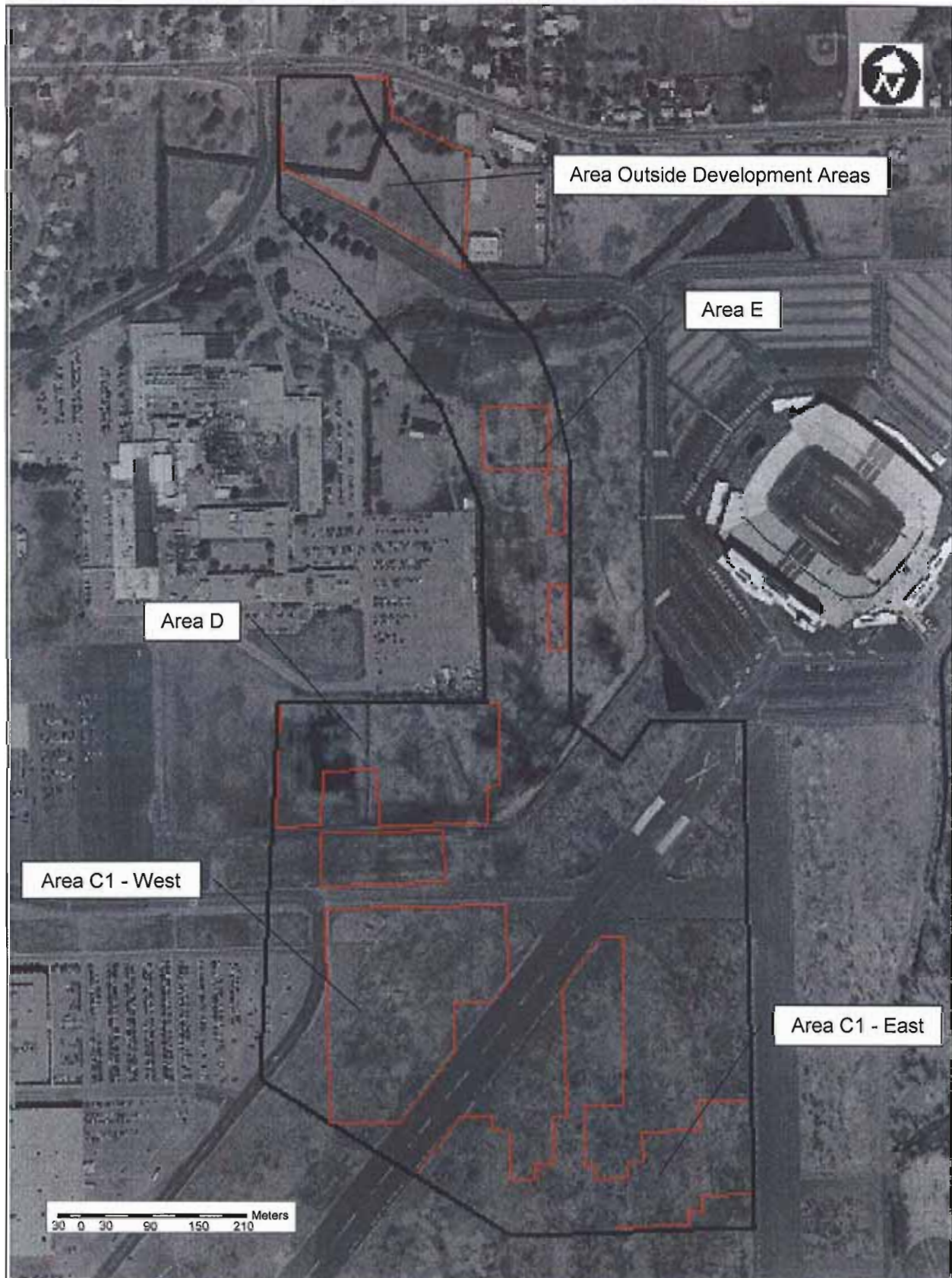


Figure 2. Plan view of the Area of Potential Effect depicting the location of Areas B, C1, D, E and Area Outside Development Areas.



Figure 3. Overview photo of the Area Outside the Development Areas, facing northeast.

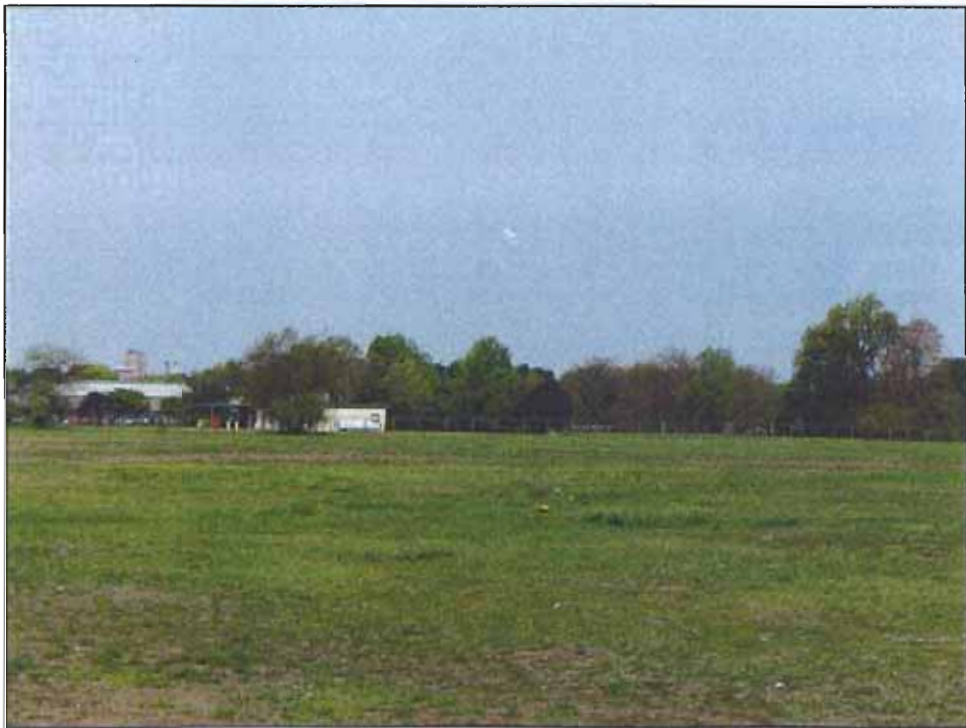


Figure 4. Overview photo Development Area E, facing northwest.



Figure 5. Overview photo of the Development Area D, facing northeast (note Rentschler Stadium in right of picture).



Figure 6. Overview photo Development Area C1-West, facing southeast.



Figure 7. Overview photo of the Development Area C1-East and Locus 4, facing southwest.

evaluating the National Register significance of cultural resources identified during the execution of the subsequent cultural resources survey.

Following the completion of all background research, the “archaeologically sensitive” portions of Areas C1, D, E and Areas Outside Development Areas were subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, systematic subsurface testing, and photo-documentation. The sampling strategy was designed to provide coverage of all portions of the “archaeologically sensitive” areas. The pedestrian survey portion of this investigation included visual reconnaissance of all areas scheduled for impacts by the proposed development project, as well as intensive photo-documentation of the examined portions of Areas C1, D, and E, as well as the Area Outside the Development Areas located at the intersection of the Pratt & Whitney entrance and Silver Lane.

Because the historic research indicated that they contained significant amounts of fill deposits and/or evidence of significant past disturbances, Areas C1, D, and the Area Outside the Development Areas were examined using shovel

tests positioned at 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) apart. Area E, in contrast, was identified by Archaeological and Historical Services, Inc., as the possible location of a Native American wigwam site dating from the late eighteenth century. As such and at the request of the Connecticut State Historic Preservation Office, this area was examined through the excavation of shovel tests at 15 m (49.2 ft) intervals along survey transects spaced 15 m (49.2 ft) apart. The above-described survey methodology was approved by Dr. David Poirier of the Connecticut State Historic Preservation Office prior to the initiation of fieldwork and it is in keeping with the reconnaissance survey guidelines promulgated in the *Environmental Review Primer for Connecticut’s Archaeological Resources*.

During survey, each shovel test measured 50 cm (19.7 in) in size and each was excavated to a minimum depth of 50 cmbs (19.7 inbs). Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within identified strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 cm

(0.25 in) hardware cloth; extremely wet soils were hand-sifted, troweled, and examined visually for cultural material. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Finally, each shovel test was backfilled immediately upon completion of the archeological recordation process.

Project Results and Recommendations

During completion of this comprehensive Phase I cultural resources reconnaissance survey, a total of four non-site cultural resources loci were identified (Loci 1 through 4). These included Locus 1, situated within the Area Outside the Development Areas; Locus 2, located within Development Area E; Locus 3, identified within Development Area D; and Locus 4, recorded within Development Area C-1. These non-site cultural resources loci are described briefly below.

Locus 1, which was described as round in configuration, produced a single whiteware sherd. This artifact was recovered from a disturbed topsoil deposit. While no other historic or prehistoric artifacts were collected from the locus area, shovel testing of the project parcel did result in the identification of numerous examples of modern beer bottle glass, plastic, cellophane wrappers, asphalt, concrete pieces, and asphalt roofing shingles in both Stratum I and Stratum II of the shovel tests. Their identification indicates that both the Locus 1 area and the Area Outside the Development Areas as a whole have been subjected to significant impacts as a result of building demolition and subsequent landscape restructuring. Shovel testing within the confines of Locus 1 failed to identify any intact cultural deposits. As a result, the Locus 1 area was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no additional testing of this non-site cultural resources locus or the Area Outside the Development Areas is recommended.

Locus 2 produced two plain whiteware sherds from two separate shovel tests within Development Area E. Careful examination of the stratigraphy of both artifact producing shovel tests indicated that the cultural material

originated from fill deposits. In addition, while no other historic or prehistoric artifacts were collected from Locus 2, examination of the “archaeologically sensitive” areas associated with Development Area E did result in the identification of numerous examples of modern beer bottle glass, plastic items, cellophane wrappers, asphalt, and bottle caps. Their identification indicates that both the Locus 2 area and the previously identified “archaeologically sensitive” areas have been subjected to significant impacts as a result of modern earth moving and fill deposition. Thus, Locus 2, which lacks research potential, was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Because no evidence of intact cultural deposits were identified, no additional testing of this non-site cultural resources locus or the Area of Potential Effect associated with Development Area E is recommended.

Described as round in configuration, Locus 3, which was recorded within Development Area D, yielded a single undecorated whiteware sherd. This artifact was recovered from a fill deposit. No other historic or prehistoric artifacts were collected from the locus area, and no cultural material and/or cultural features were identified within the confines of Locus 3. Detailed examination of Locus 3 and Development Area D as a whole revealed that the area has been subjected to severe impacts in the past as a result of building and road construction, installation of the nearby taxiway, diversion of Willow Brook, and substantial filling related to the construction of Rentschler Field. As a result, no deposits containing intact cultural resources were identified. Thus, Locus 3 was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no additional testing of this non-site cultural resources locus or Development Area D is recommended.

Finally, Locus 4, which was identified within the southeastern portion of Development Area C-1, produced a total of 15 historic period artifacts from five survey shovel tests and two delineation shovel tests. The recovered cultural material was collected from a disturbed fill

layer of modern origin, as well as a layer of mottled yellowish brown (10YR 5/4) sand likely representing modified soils related to airfield construction. Cultural material collected from Locus 4 consisted of plain whiteware sherds, brick fragments, machine made bottle glass rim shards, and nails. Temporally diagnostic artifacts recovered from the locus indicate that it dates from the turn of the twentieth century.

In addition, to the recovered cultural material, Phase IB survey and delineation shovel testing of Locus 4 resulted in the identification of a small pocket of iron slag and a group of mortared bricks; these items were situated approximately 90 m (300 ft) apart and they could not be associated stratigraphically. Further, no cultural material was found that could provide a firm date for their use, though based on the cultural material found above them in the same shovel test, they probably date from the turn of the twentieth century. Based on the archaeological data at hand, as well as on a few early photographs of the area (ca. 1930 to 1934), the identified brick concentration likely represents agricultural use of the land, possibly a tobacco barn. Because the stratigraphic integrity of this resource appears to have been impacted and because numerous and better examples of this type of resource exist within the region, Locus 4 retains little, if any, research potential. As a result, the Locus 4 area was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no additional testing of this non-site cultural resources locus or Development Area C1 is recommended.

In sum, the current Phase I cultural resources reconnaissance survey revealed that Locus 1 through Locus 4 do not possess research potential. As a result, these cultural resources lack the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing and/or recordation of Locus 1 through 4 or the proposed Development Areas are recommended.

Project Personnel

Ms. Catherine M. Labadia, M.A., served as Principal Investigator for this project. She was assisted by Mr. David R. George, M.A., R.P.A., and Mr. Aaron Palermo, B.A., who completed the fieldwork for this project. Mr. George also performed the artifact analysis and curation for this investigation, while Ms. Labadia produced this document. Finally, Ms. Kristen Keegan, M.A., compiled the History Chapter and Mr. William Keegan, B.A., provided data for the Previous Investigations section of this report, as well as GIS support services and project mapping.

Organization of the Report

The natural setting of the region encompassing the proposed project area is presented in Chapter II; it includes a brief overview of the geology, hydrology, soils, flora, fauna, and climate of the project region. The prehistory of the project region is outlined in Chapter III. The history of the Area of Potential Effect, as well as the project vicinity in general, is chronicled in Chapter IV. A review of all previously recorded archeological sites located in the immediate vicinity of the proposed project area is contained in Chapter V; it is based on data maintained by Heritage Consultants, LLC, as well as on data obtained from the Connecticut State Historic Preservation Office. The field methods used to complete this investigation are discussed in Chapter VI; that chapter also includes a discussion of the laboratory methods and procedures used to process and analyze the cultural material recovered during the reconnaissance survey. The results of this investigation, including a description of each identified non-site cultural resource, are described in Chapter VII. A summary and management recommendations for the identified cultural resources and the proposed project are presented in Chapter VIII. Finally, Appendix I contains a detailed figure presenting the chain-of-title for the parcels of land that comprise the proposed project parcel. Finally, Appendix II contains resumes for the key personnel associated with this undertaking.

CHAPTER II

NATURAL SETTING

Introduction

The State of Connecticut exhibits considerable variability in geology, hydrology, soils, flora, and fauna despite the fact that its boundaries encompass only approximately 5,000 mi² or roughly 1,295,040 ha (3,200,000 ac) of land. Connecticut's landscape, which lies in the northern temperate deciduous forest biome (Braun 1950; Shelford 1963), contains many subregions, including areas of locally high relief such as the eastern and western uplands areas; extensive riverine systems dominated by wide alluvial floodplains such as those in the north-central part of the state; widespread and extensive wetland systems composed of swamps, freshwater marshes, and tidal estuaries; and, finally, coastal areas. Regional differences in climatic variables, including precipitation, temperature, and growing season, as well as differences in topography and distance from the Long Island Sound, are reflected in the distribution of various floral and faunal resources (Dowhan and Craig 1976:25).

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut has undergone numerous environmental changes. Variations in climate, geology, and physiography have led to the "regionalization" of Connecticut's modern environment. It is clear, for example, that the northwestern portion of the state has very different natural characteristics than the coastline. Recognizing this fact, Dowhan and Craig (1976), as part of their study of the distribution of rare and endangered species in Connecticut, subdivided the state into various ecoregions (Figure 8). Dowhan and Craig (1976:27) defined an ecoregion as:

"an area characterized by a distinctive pattern of landscapes and regional climate as expressed by the vegetation composition and pattern, and the presence or absence of certain indicator species and species groups. Each ecoregion has a similar interrelationship between landforms, local climate, soil profiles, and plant and animal communities. Furthermore, the pattern of development of plant communities (chronosequences and toposequences) and of soil profile is similar in similar physiographic sites. Ecoregions are thus natural divisions of land, climate, and biota."

Dowhan and Craig defined nine major ecoregions for the State of Connecticut (Figure 8). They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: the North-Central Lowlands ecoregion. A brief summary of the North-Central Lowlands is presented below. It is followed by a discussion of the geology of the State of Connecticut, as well as by overviews of the hydrology, soils, flora, fauna, and climate characteristic of the region containing the proposed project area.

North Central Lowlands Ecoregion

The North-Central Lowlands region consists of a broad valley located between approximately 40.2 and 80.5 km (25 and 50 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by extensive floodplains, backwater swamps, and lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the easternmost of which is referred to as the Bolton Range (Bell 1985:45). These ridge systems comprise portions of the terraces that overlook

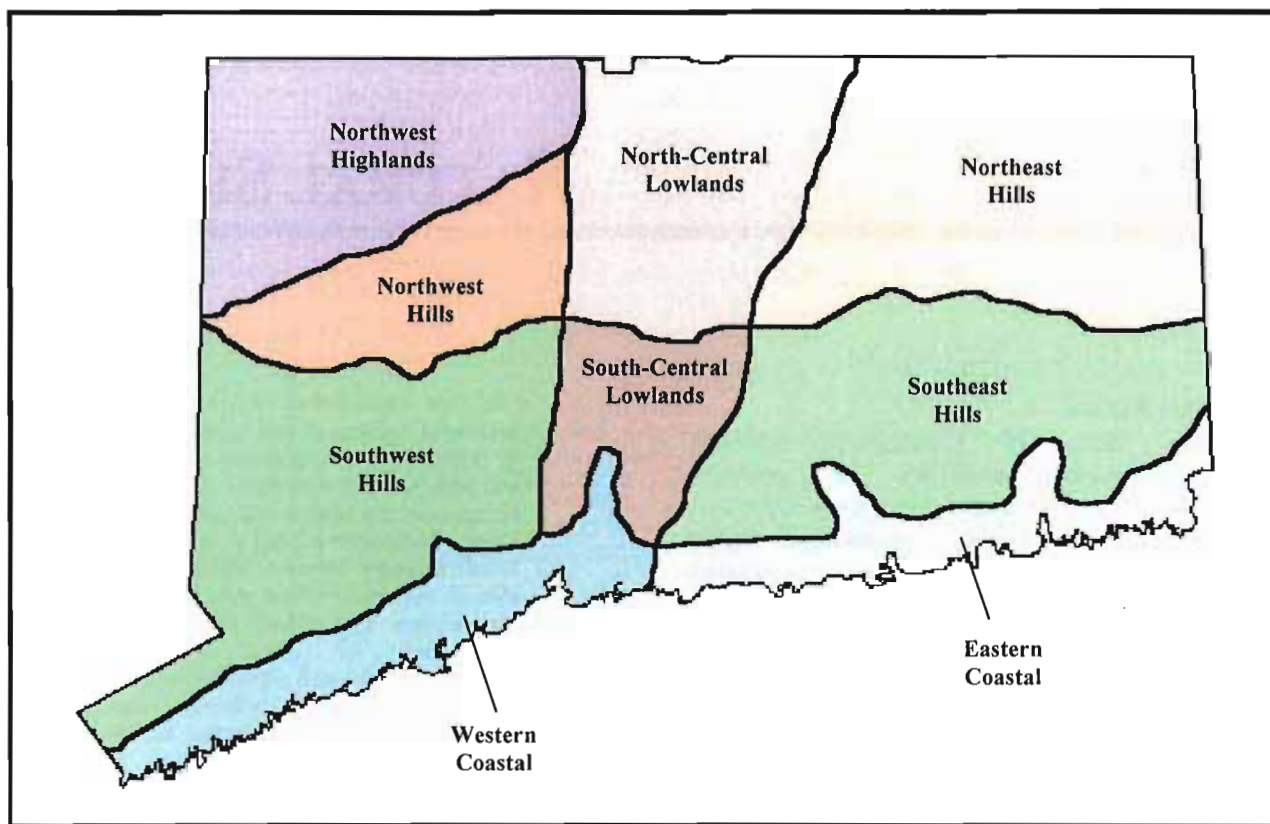


Figure 8. Ecoregions of Connecticut (adapted from Dowhan and Craig 1976).

the larger rivers such as the Connecticut and Hockanum Rivers (Figure 9). Elevations in the North-Central Lowlands range from 15.2 to 76.2 m (50 to 250 ft) above sea level, reaching a maximum of nearly 274 m (900 ft) above sea level along the trap rock ridges that surround the central valley. The bedrock of the region is composed of Triassic sandstone, interspersed with very durable basalt or “traprock” (Bell 1985). Soils found in the upland portion of this ecoregion are developed on red, sandy to clayey glacial till, while those soils situated nearest to the rivers are situated on widespread deposits of stratified sand, gravel, silt, and alluvium resulting from the impoundment of glacial Lake Hitchcock (Sheanin and Hill 1953).

The major forest type found in the North-Central Lowlands region is the Central Hardwoods-Hemlock-White Pine type. Major tree species identified in this area include red, black, and white oaks (*Quercus rubra*, *Q. velutina*, and *Q. alba*), shagbark, pignut and butternut hickories (*Carya ovata*, *C. glabra*, and *C. cordiformis*), hemlock (*Tsuga canadensis*), and white pine (*Pinus strobes*) (Table 1). White

Table 1. Trees found within the North-Central Lowlands ecoregion.

COMMON NAME	LATIN NAME
Staghorn Sumac	<i>Rhus typhina</i>
Silver Maple	<i>Acer saccharinum</i>
Red Maple	<i>Acer rubrum</i>
Red Mulberry	<i>Morus rubra</i>
Black Oak	<i>Quercus velutina</i>
White Oak	<i>Quercus alba</i>
Shagbark Hickory	<i>Carya ovata</i>
Bitternut Hickory	<i>Carya cordiformis</i>
Mockernut Hickory	<i>Carya tomentosa</i>
Black Walnut	<i>Juglans nigra</i>
Butternut	<i>Juglans cinerea</i>
Slippery Elm	<i>Ulmus rubra</i>
Black Locust	<i>Robinia pseudocacia</i>
Aspen	<i>Populus tremuloides</i>
Crab Apple	<i>Malus sp.</i>
Black Willow	<i>Salix nigra</i>
Green Ash	<i>Fraxinus pennsylvanica</i>
Black Tupelo	<i>Nyssa sylvatica</i>
Sycamore	<i>Plantanus occidentalis</i>
Eastern Hemlock	<i>Tsuga canadensis</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Eastern White Pine	<i>Pinus strobus</i>
Beech	<i>Fagus grandifolia</i>
Boxelder	<i>Acer negundo</i>

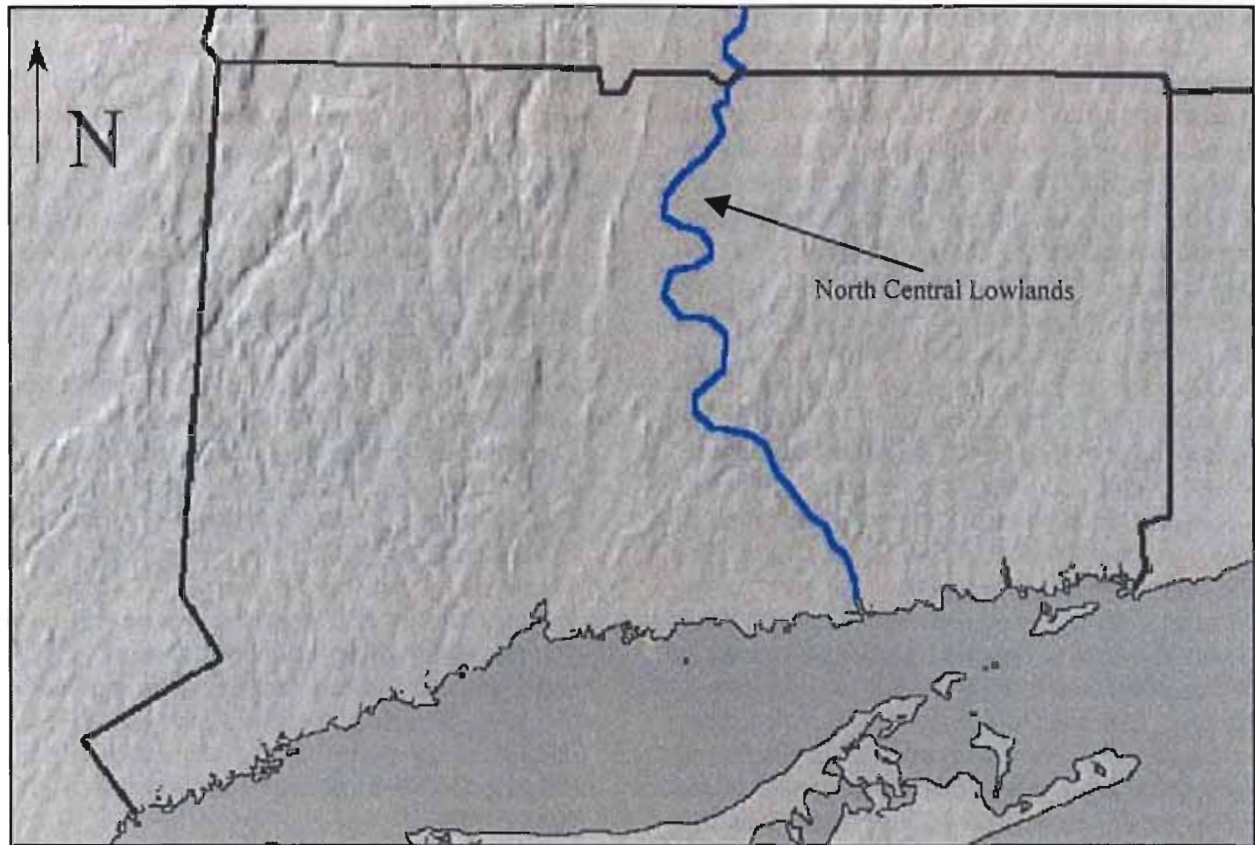


Figure 9. Image of Connecticut depicting topographic relief and the North Central Lowlands ecoregions (adapted from Johns Hopkins University, Applied Physics Laboratory).

pine reaches its southern limit in this region. Other trees identified in the North-Central Lowlands region include red cedar (*Juniperus virginiana*), black birch (*Betula lenta*), gray birch (*Betula populifolia*), and white ash (*Fraxinus americana*). Maples (*Acer* sp.) are also common in disturbed and secondary successional habitats that are characteristic of the area. As discussed in more detail below, the various resources found within the Central Hardwoods-Hemlock-White Pine forests were exploited by prehistoric Native American and historic residents of the area. They consisted of foodstuffs, wood for fuel, and raw materials for tool production.

The Geology of Connecticut

The development of Connecticut's ecoregions is tied to its underlying geology. The geology of the State of Connecticut is complex, and it is the product of both large scale and long-term constructional and destructional processes. These processes are described briefly below.

Continental Drift, Erosion, and the Early Development of Connecticut

The geology of Connecticut has its origins in developmental processes that began as early as 500 million years ago (mya) (Bell 1985). At that time, the earth was characterized by the presence of several proto-continent and large islands that were distributed around the equator and within the southern hemisphere. By approximately 250 mya, these proto-continent and islands, i.e., large tectonic plates, had "drifted" together to form the supercontinent of Pangea. The supercontinent remained in place as a large landmass for approximately 50 million years, after which it began to split into several large pieces that are recognized today as the seven continents. During this early developmental sequence, the land that was to become known as Connecticut was positioned within the heart of Pangea. As a result, the formation and eventual disintegration of Pangea has left its mark on the geology of Connecticut (Bell 1985; Robinson and Hall 1980).

Connecticut's Four Terranes

Geologists recognize that the State of Connecticut is composed of four major underlying terranes that were pushed into close proximity with one another during the formation of Pangea (Bell 1985). These terranes are defined on the basis of shared geological attributes, specifically rocks and strata with similar histories and chemical compositions. The four terranes underlying Connecticut's landscape are known as the Proto North American, Newark, Avalonia, and Iapetos terranes; the proposed project items lie within the Iapetos terrain (Bell 1985:140). The eastern edge of the Proto North American terrane, corresponding to today's Northwest Highlands ecoregion, once formed the eastern shoreline of the area now known as the United States. The Newark terrane, corresponding in area to the Central Valley, formed as Pangea began to break apart. This area underwent tremendous stresses as it was pulled apart slowly by the disintegration of Pangea. Avalonia, which can be identified today as a series of gneiss and granitic rocks distributed in a broad arc in the southeastern portion of the state, once was part of a large island that was situated to the southeast of the Proto North American continent prior to the formation of Pangea. Finally, The Iapetos terrane, corresponding roughly to the Eastern and Western Uplands areas, formed during the coalescence of Pangea. These portions of the state represent areas that once were shallow portions of the Iapetos Ocean; it eventually was filled with sediments eroding from the Proto North American terrane and Avalonia. Both the Proto North American terrane and Avalonia, because they existed prior to the formation of Pangea, predate the Iapetos and Newark terranes. They date from prior to 570 mya, whereas the intervening Iapetos and Newark terranes, formed during the period of continental collision, date from approximately 500 to 250 mya (Bell 1985:153).

While these four terranes underlie Connecticut's approximately 160.9 km (100 mi) wide modern landscape, they once spanned more than 804.6 km (500 mi) from east to west (Bell 1985:147). During the course of the formation of Pangea, Avalonia was pushed westward. Sediments from Avalonia and the Proto North American continent eroded and washed into the

shrinking Iapetos Ocean, forming what was to become the Eastern and Western Uplands of Connecticut. When Pangea formed, the area became cemented together and confined to the space between the state's modern borders (Bell 1985).

As the supercontinent divided, tremendous forces were put upon the area, forming a large fissure that eventually became the Newark terrane. The Newark terrane was filled with sediments eroding from the east and west, forming the distinctive sandstone and brownstone strata of the Central Valley of Connecticut. As this area continued to expand, the underlying bedrock began to tilt towards the east, allowing large lava flows to reach the surface and cool into a series of traprock ridges. These ridges still are visible today; prominent among them is Metacomet Ridge. Eventually, the pressures acting upon the Newark terrane were relieved when a larger fissure opened to the east, allowing the European and African continents to move off to the east and the Atlantic Ocean to occupy the intervening area (Bell 1985).

For millennia after the break up of Pangea, the area that has become known as Connecticut has undergone extensive erosion. Continued washing away of sediments originating from what was Proto North America, the Iapetos terrane, and Avalonia have aided in the formation of today's landscape. These forces, coupled with the tremendous power of the glaciers that scoured the area during the Pleistocene, have left Connecticut what it is today, a rich and varied landscape consisting of a mosaic of mountains, rolling hills, fertile valleys, a rocky coastline, and numerous watercourses.

The Geology of the Connecticut Valley

Connecticut lies within the New England province as defined by Fenneman (1938). This province is characterized by rocks that "have been greatly compressed, generally metamorphosed, uplifted, and deeply denuded" (Fenneman 1938:343). The New England province extends from roughly southeastern New York and northern New Jersey to as far inland as Canada. The surface of the uplands forms a peneplain that slopes southeastward

from maximum inland altitudes of approximately 670.5 m (2,200 ft) to 121.9 m (400 ft) or 152.4 m (500 ft) before reaching the seaboard lowlands. The topography is that of a maturely dissected plateau with numerous hills and mountains rising above the general level of the upland.

Bell (1985) recently has re-interpreted the geology of Connecticut and he has divided the state into four smaller geological regions. These regions consist of the Western Uplands, the Central Valley, the Eastern Uplands and the Coastal Slope. The proposed project area is located within the heart of the Central Valley, designated by Dowhan and Craig (1976) as the North-Central Lowlands ecoregion. This area is discussed in more detail below.

The Connecticut River Valley has been referred to by many names, including the Central Valley, the Connecticut Valley, the Hartford Basin, the Mesozoic Valley, and the Newark Terrane (Bell 1985:13; Fenneman 1938; Hughes and Allen 1976). These descriptors indicate that the valley is centrally located in the state and that it dates from between 225 to 65 mya. While Fenneman (1938) originally classified the Central Valley as a subdivision of the seaboard lowland section, it is clear that it has a very different geological history. The Central Valley consists of an area that measures approximately 152.8 km (95 mi) in length by 32.2 km (20 mi) in width. It reaches its southernmost point in the vicinity of the towns of Glastonbury and Rocky Hill, Connecticut. The Central Valley has a moderately rolling floor and it averages between 15.2 and 76.2 m (50 and 250 ft) NGVD (Figure 10). The underlying rocks found in this area include "Triassic sandstones, conglomerate, and shale,

all relatively soft, with included igneous sheets, extrusive and intrusive, both familiarly known as traprock" (Fenneman 1938:373). The constant erosion of the bedrock gives this region its distinctive red soils (Bell 1985; Sheanin and Hill 1953).

Following deglaciation between approximately 17,000 and 13,000 years ago, the Central Valley was inundated by glacial Lake Hitchcock (Thorson and Schile 1995). Named after Reverend Edward S. Hitchcock, this impoundment of a large glacial meltwater lake was facilitated by a massive build-up of glaciolacustrine sediments between Glastonbury and Middletown, Connecticut. Glacial Lake Hitchcock extended for more than 241.4 km (150 mi) in a north-south direction and for approximately 32.2 km (20 mi) in an east-west direction (Bell 1985: 20-21).

A chronology for Lake Hitchcock first was established through by Antev (1922) through his detailed examination of lake varves deposited in the region. Subsequent radiocarbon correlations with Antev's study indicates that Lake Hitchcock formed approximately 15,600 years ago and that it remained in place for approximately 3,000 years. At approximately 12,400 years ago the build up of sediments at Middletown, Connecticut was breached and the lake drained rapidly (Ridge and Larsen 1990), creating major changes in downstream landscapes.

Geological investigations of the dry lakebed soils indicate that the draining of glacial Lake Hitchcock was very rapid, and that it produced many unique geological features within the Central Valley. Most notable among these are eolian features such as massive sand dunes and lacustrine spits that provide the basis

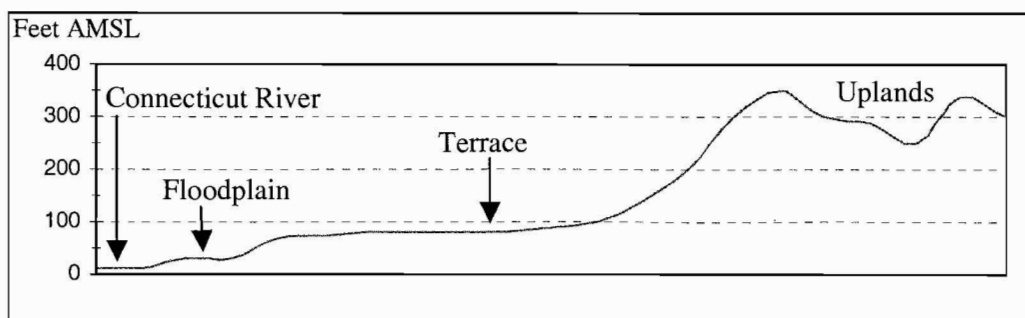


Figure 10. Landscape profile of the North-Central Lowlands ecoregion.

for modern terrace and inland physiography (Thorson and Schile 1995). In addition, sediments found in the Central Valley proper contain very few rocks, and with the addition of massive amounts of nutrients from the regular flooding of the Connecticut River, they have become some of the best agricultural soils in New England (Sheanin and Hill 1953).

In addition to the low rolling valley floor, the Central Valley also contains a series of high traprock ridges. The largest of these ridges flanks the western border of the Central Valley and it is known as Metacomet Ridge. The Metacomet Ridge extends from Branford, Connecticut in the south to Northampton, Massachusetts in the north. It consists of dense traprock or basalt. Unlike the remainder of the Central Valley's easily eroded sandstone and brownstone, the basalt of Metacomet ridge is very erosion-resistant. The igneous rock of Metacomet Ridge was formed when lava breached the ground surface and cooled. The basalt from the traprock ridges has been quarried by prehistoric Native American groups and used for stone tool manufacturing (Calogero 1991).

Hydrology in the Vicinity of the Proposed Project Area

The proposed project area is situated within the vicinity to two rivers (i.e., the Connecticut and Hockanum Rivers), as well as numerous tributaries. The Hockanum River, which is a tributary of the Connecticut River, is located approximately one-third of a mile to the north of the proposed project area. It drains much of the East Hartford/Manchester region, and it would have served as an excellent area for prehistoric occupation, as well as a means of transportation to the Connecticut River from the east. The Connecticut River is located approximately 1.2 miles to the west of the Area of Potential Effect, easily within a days walk of the proposed project parcel; as such, it too would have served as a resource extraction area, as well as a transportation thoroughfare for Native American and historic populations alike.

Smaller tributaries located within the vicinity of the Area of Potential Effect include Willow Brook and Pewterpot Brook. These brooks also offered prehistoric and historic population with sources of potable freshwater

and other natural resources. As previous archeological investigations in Connecticut have demonstrated, streams and rivers of the type located in the vicinity of the proposed project area were focal points for prehistoric Native American occupation because they provided vital linkages to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils in the Vicinity of the Proposed Project Area

Soil formation is the direct result of the interaction of a number of variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archeological deposits are buried within the soil, they are subject to a number of diagenic processes. Different classes of artifacts may be preferentially protected, or unaffected by these processes, whereas others may deteriorate rapidly. Cyclical wetting/drying, freezing/thawing, and compression can accelerate chemically and mechanically the decay processes for animal bones, shells, lithics, ceramics, and plant remains. Lithic and ceramic artifacts are largely unaffected by soil pH, whereas animal bones and shells decay more quickly in acidic soils such as those that are present in within the current study area. In contrast, acidic soils enhance the preservation of charred plant remains. A brief review of the soils located within the study region is presented below.

The Connecticut and Hockanum River Valleys in the vicinity of the current project area are dominated by floodplains that have been dissected in various areas by down-cutting tributaries (Sheanin and Hill 1953). These floodplains are flanked on either side by terraces that represent transitional landforms between the alluvial bottomlands and the rocky uplands. Sands, loams, and alluvium in the vicinity of the proposed project area have been deposited both by glacial processes and by overbank flooding, and they continue to be reworked by both natural (e.g., water and wind erosion) and anthropogenic (e.g., plowing and development) means. While United States Department of Agriculture Soil Survey of 1953 does not specify a soil type(s) for the immediate project area and

Rentschler Field (probably because massive disturbance to the area had taken place by then through development of the airfield), numerous other soil types are located on the perimeter of the airfield. These include Windsor loamy coarse sands (WuA, WdA and WvA), Ninegret fine sandy loam (NnA), Saco silty loam (SbA), and Belgrade silty loam (BaB) (Sheanin and Hill 1953). These soil types most likely represent the types of deposits that were once contained within the Rentschler Field area prior to its massive restructuring through filling and grading. According to their descriptions, these soils are situated generally on low slopes and were sufficient for use as croplands. Throughout the historic era, these soil types have been used for cultivating corn and tobacco; in fact, historical documentation indicates that much of Rentschler Field once was planted in tobacco (see Chapter IV).

Flora Noted within the Proposed Project Area

A wide variety of trees are found within the vicinity of the proposed project area (Niering and Olmstead 1995; Peterson and McKenny 1968). These species are abundant, especially in microenvironments located close to the Connecticut and Hockanum Rivers (Table 1). Trees common to the area include oaks (*Quercus* sp.), pines (*Pinus* sp.), hickories (*Carya* sp.), maples (*Acer* sp.), beech (*Fagus grandifolia*), Eastern Hemlock (*Tsuga canadensis*), and Eastern Red Cedar (*Juniperus virginiana*), among others (Table 1).

Historic Native Americans in the northeastern United States used trees and tree products for a number of technological purposes. Oak, hickory, and other hardwoods were preferred for firewood and construction materials. Pestles and mortars also were made of hardwoods, especially hickory. Hickory nuts were an important food resource for prehistoric (and some historic) Native American populations throughout the eastern United States. Whole hickory nuts were crushed and added to boiling water to produce a rich milky liquid (hickory milk) with high oil and protein content (Larson 1980:187; Swanton 1946:273). Hickory nutshell is a major component of Archaic and Woodland period paleoethnobotanical assemblages (Asch

and Asch 1985; Chapman and Shea 1981; Johannessen 1984). In the American Bottom and the Southeast area, hickory nutshell decreased during the Emergent Mississippian period, but still remained an important part of most Eastern Woodland subsistence economies until contact (Johannessen 1984). In addition, pecans (a thin-shelled hickory species) were gathered and later cultivated by European settlers. According to Brown (1965:43) “the cultivated forms have much larger meats, less bitter material in the grooves of the meat, and some better horticultural varieties have much thinner shells.”

Archeological acorn nutshell tends to be poorly preserved and highly fragmented, making comparisons between raw counts of acorn and hickory nutshell misleading. Paleoethnobotanical evidence of acorn use begins during the Archaic period (Chapman and Shea 1981) and it continues, at a low rate, until the late prehistoric. At contact, several Native American groups consumed acorn nutmeats that had been leached in water to remove the toxic tannins. These nutmeats were ground and used as flour for breads (Tuck 1978). Another use of acorn nutmeat was for oil, which was used for cooking and personal adornment. According to Larson (1980:187-197), acorns were harvested during the autumn months.

In addition to trees, many of the locally available fleshy fruits were good sources of sugar, vitamins, and minerals. Historic Native American groups in the Northeast dried some fruits for winter use, but most were consumed fresh. European settlers often preserved fruits by drying, canning, or making them into jams. In addition, the seeds of several weedy plants also were collected and processed by historic, northeastern Native Americans. Grains generally are assumed to have been major carbohydrate sources, but many of the wild grains were rich in oils and proteins as well. Some of the more common wild grains in the area include pigweed (*Chenopodium* sp.), ragweed (*Ambrosia trifida*), sedge (*Cyperus* sp.), panic grass (*Panicum* spp.), knotweed (*Polygonum* sp.), and wild rice (*Zizania aquatica*). In addition, there is paleoethnobotanical evidence that goosefoot, sunflower (*Helianthus annuus*), sumpweed (*Iva annua*), maygrass (*Phalaris caroliniana*), and knotweed, all of which thrive in bottomland

environments, were cultivated or even domesticated in the Eastern Woodlands (Asch and Asch 1985; Chapman and Shea 1981; Ford 1985; Fritz 1990; Smith 1992; Watson 1989), though evidence of this remains scarce in Connecticut (see George and Dewar 1999 for a discussion of the possible domestication of *Chenopodium* sp., in Connecticut).

Plants that were sources of “greens” also were present on the riverbanks and other disturbed areas of the Northeast. These species include goosefoot, pokeweed (*Phytolacca americana*), purslane (*Portulaca* sp.), knotweed, and pigweed (*Amaranthus* sp.). Greens are generally young leaves and shoots that are steamed or boiled prior to consumption. Such foods were important additions to the late winter/early spring diet of Native Americans and Euro-Americans. Greens were a source of numerous minerals and vitamins, as well as a relief from the otherwise monotonous winter meals for both Euro-American and Native American residents.

Root foods were noted as important subsistence items to Native Americans. Roots of sedges, cat/greenbriars (*Smilax* sp.), jack-in-the-pulpit (*Arisaema atrorubens*), and cattail (*Typha* sp.) all were utilized. Roots were important subsistence items because many could be gathered in the late fall and winter when other plant foods were unavailable. In addition, roots foods could have been dried and stored for long periods of time. Many other plant species also had historic and presumably prehistoric technological uses. Vining species such as grape (*Vitis* sp.) were used for basketry.

Finally, species such as hickory, elms (*Ulmus rubra*), and oaks may have been sold or used locally for lumber by Europeans. The young black willow (*Salix nigra*) twigs can be woven into baskets and wicker furniture. White oak (*Quercus alba*) can be split into fine strips and used for basketry. Wine and beer barrels also were produced from white oak lumber. American elm wood was steamed and bent into forms for barrel and wheel hoops, veneer, and baskets.

This summary indicates that the flora of the proposed project region is not only diverse in nature, but also could have been put to a multitude of uses by both prehistoric and historic

inhabitants of the Central Valley area. The vegetation provided not only sustenance, but raw materials for commodities, tools, and fires.

Fauna Noted within the Vicinity of the Proposed Project Area

The Connecticut and Hockanum River areas also contain a wide variety of faunal resources (Tables 2 - 6). Most of the terrestrial animal species present in these river valleys range freely between the upland and bottomland environments. Tables 3 - 6 list the scientific and common names of animals noted within this reach of the Connecticut and Hockanum Rivers (Banks, McDiarmid, and Gardner 1987).

White-tailed deer (*Odocoileus virginianus*) and bear (*Ursus americana*) were important resources to Native Americans (Tuck 1978) and Euro-Americans (Table 2). Both species were hunted for the large amount of meat present on a given animal (Larson 1980), and they were excellent sources of raw materials, e.g., bone, antler, sinew. Deer bones were made into hide preparation tools, needles, beads, decorative items, and musical instruments. Deer antler was used in the manufacture of arrow points, club tips, glue, ornaments, and tools. Thread and some tools were made from entrails. In short, almost every part of the deer carcass was exploited by these groups.

Table 2. Common mammals found within the North-Central Lowlands ecoregion.

COMMON NAME	LATIN NAME
Beaver	<i>Castor canadensis</i>
Porcupine	<i>Erethizon dorsatum</i>
Woodchuck	<i>Marmota monax</i>
Skunk	<i>Mephitis mephitis</i>
Meadow Vole	<i>Microtus pennsylvanicus</i>
Mink	<i>Mustela vison</i>
Raccoon	<i>Procyon lotor</i>
White-tailed Deer	<i>Odocoileus virginianus</i>
Muskrat	<i>Ondatra zibethicus</i>
Gray Squirrel	<i>Sciurus carolinensis</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>
Rabbit	<i>Sylvilagus</i> sp.
Red Fox	<i>Urocyon cinereoargenteus</i>
Gray Fox	<i>Vulpes fulva</i>
Bear	<i>Ursus americana</i>
Opossum	<i>Didelphis virginianus</i>
Weasels	<i>Mustela</i> sp.

Historic accounts of northeastern Native Americans suggest that the second most useful animal was bear. Bear fat was a vital food resource during the late winter and early spring when fresh meat was relatively lean. Bear fat also was used for skin and hair treatment. In addition, bear hides were used as heavy robes and winter moccasins. As Table 2 indicates, a variety of terrestrial mammals such as rabbits (*Sylvilagus* sp.), squirrels (*Sciurus* sp.), and raccoons (*Procyon lotor*) undoubtedly were hunted by residents of the area (Larson 1980). Additional mammals, like mink (*Mustela vison*) and weasels (*Mustela* sp.) may have been hunted for their pelts, as well as their flesh.

In addition, the project area vicinity is home to a variety of bird species (Table 3). Large numbers of these birds could have been harvested during the fall and winter. The nearby marshes and aquatic environments also supported a variety of wading and songbirds. Terrestrial species such as bobwhite quail (*Colinus* sp.) and wild turkey (*Meleagris gallopavo*) would have been more abundant in the upland areas. As Swanton (1946:251) pointed out, "the turkey seems anciently to have been the most utilized [by Native Americans] of all birds." The flesh of turkeys was consumed, and the feathers used for ornaments, feather mantels, fans, and arrow production. Non-game birds (e.g. heron [*Ardea herodias*] and woodpecker [Family Picinae]) and raptorial species (e.g., hawks [*Buteo*], eagles [*Haliaeetus* sp.], and owls [Family Tytonidae]) also may have been captured by Native Americans for feathers, hides, or ceremonial purposes.

The freshwater environments of the Connecticut and Hockanum Rivers support a number of fish, reptile, and amphibian species (Tables 4-6). Among the important freshwater game fish species are bass (Family Centrarchidae), freshwater catfish (Family Ictaluridae), northern pike (*Esox* sp.), and sunfish (*Enneacanthus obesus*). Important Anadromous fish species found within the vicinity of the proposed project area include alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), American eel (*Anguilla rostrata*), and Atlantic sturgeon (*Acipenser oxyrinchus*), among others (Table 5). The presence of these fish species within a particular

drainage is dependent upon the nature of the distributary. Swamps and low gradient streams and rivers often have slower moving waters, thereby supporting backwater species such as catfish and crawfish. In terms of use, fish bones were fashioned into needles and other small tools by northeastern Native Americans. Frogs (Family Ranidae), snapping turtles (*Chelydra serpentina*), and box turtles (*Terrapene* sp.), probably were part of local subsistence systems. Other turtle species (*Chrysemys* sp.) and even snakes (Family Coluber) probably were collected by the Native American inhabitants of the area.

Table 3. Common birds found within the vicinity of the proposed project area.

COMMON NAME	LATIN NAME
Great Blue Heron	<i>Ardea herodias</i>
Wood Duck	<i>Aix sponsa</i>
Mallard	<i>Anas platyrhynchos</i>
Canada Goose	<i>Branta canadensis</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Pheasant	<i>Phasianus</i> sp.
Wild Turkey	<i>Meleagris gallopavo</i>
Bobwhite	<i>Colinus</i> sp.
Mourning Dove	<i>Zenaidura macroura</i>
Owls	Family Tytonidae
Woodpeckers	Family Picinae
Blue Jay	<i>Cyanocitta cristata</i>
American Crow	<i>Corvus brachyrhynchos</i>
Robin	<i>Turdus migratorius</i>
Sparrows	Family Emberizinae
Cardinal	<i>Cardinalis cardinalis</i>
Red-winged Blackbird	<i>Agelaius</i> sp.

Table 4. Freshwater and amphidromous fish found within the North-Central Lowlands ecoregion.

COMMON NAME	LATIN NAME
Brook Trout	<i>Salvelinus fontinalis</i>
Red Pickerel	<i>Esox americanus</i>
Golden Shiner	<i>Notemigonus crysoleucas</i>
Shiner	<i>Notropis cornutus</i>
Fallfish	<i>Semotilus corporalis</i>
Chubsucker	<i>Erimyzon oblongus</i>
Brown Bullhead	<i>Ictalurus nebulosus</i>
Sunfish	<i>Enneacanthus obesus</i>
White Perch	<i>Morone americana</i>
Yellow Perch	<i>Perca flavescens</i>
Striped Bass	<i>Morone saxatilis</i>

Table 5. Anadromous fish species found within the North-Central Lowlands ecoregion.

COMMON NAME	LATIN NAME
Alewife	<i>Alosa pseudoharengus</i>
Atlantic Sturgeon	<i>Acipenser oxyrhynchus</i>
Blue Herring	<i>Alosa aestivalis</i>
American Shad	<i>Alosa sapidissima</i>
Shad	<i>Alosa mediocris</i>
Atlantic Salmon	<i>Salmo salar</i>
Rainbow Smelt	<i>Osmerus eperlanus</i>
American Eel	<i>Anguilla rostrata</i>

Table 6. Common amphibians and reptiles found within the North-Central Lowlands ecoregion.

COMMON NAME	LATIN NAME
Toads	Family Bufonidae
Frogs	Family Ranidae
Snapping Turtle	<i>Chelydra serpentina</i>
Box Turtle	<i>Terrapene</i> sp.
Painted Turtle	<i>Chrysemys</i> sp.
Racers	Family Coluber
Northern Water Snake	<i>Nerodia sipedon</i>
Garter Snake	<i>Thamnophis</i> sp.
Eastern Ribbon Snake	<i>Thamnophis sauritus</i>

Climate in the Vicinity of the Proposed Project Area

The climate in the area encompassing the proposed project area is affected by both cold, dry air masses originating from the Arctic region and warm, humid air masses that move northward from the Gulf of Mexico region (Sheanin and Hill 1953). The average maximum temperature of the area ranges between 26.6 to 29.4 degrees Centigrade (80 to 85 degrees

Fahrenheit) in the summer and between 1.6 to 4.4 degrees Centigrade (35 to 40 degrees Fahrenheit) in the winter. The average minimum winter temperature of Hartford County is -6.7 degrees Centigrade (20 degrees Fahrenheit), while during summer the average minimum temperature is 15.6 degrees Centigrade (60 degrees Fahrenheit). Because of this seasonal cycling in temperatures, the first frost of the year typically occurs in October, and the growing season averages approximately 180 days per year (Sheanin and Hill 1953; Brumbach 1965; NOAA 1973, 1974).

Annual rainfall in the vicinity of the proposed project area ranges from 116.8 cm (46 in) in the western part of the county to 104.1 cm (41 in) in the eastern part of the county. Rainfall is fairly evenly distributed throughout the year, with the lowest amounts occurring in February and October. The extreme range in monthly precipitation is from 76.2 to 127 cm (30 to 50 in). In terms of winter precipitation, the area encompassing the proposed project parcel receives approximately 101.6 cm (40 in) of snow each winter, with storms typically occurring between November and March. During winter, the prevailing winds are from the south or southwest. Thunderstorms, on average, occur approximately 20 to 30 times per year. They tend to be the worst type of storm that typically impacts the area; but infrequently occurring tornadoes and hurricanes can cause significant damage to homes, businesses, and crops. Finally, floods are not frequent in the area, but winter ice storms may cause significant power outages, traffic-related difficulties, and damage to vegetation (Sheanin and Hill 1953).

PREHISTORIC SETTING

Introduction

Prior to the late 1970s and early 1980s, very few systematic archeological surveys of large portions of the state of Connecticut had been undertaken. Rather, the prehistory of the region was studied at the site level. Sites chosen for excavation were highly visible and they were located in such as areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the prehistory of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by prehistoric Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, were the focus of settlements and exploitation in the prehistoric era.

This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archeological studies were completed, including the Eastern Coastal, Southeast Hills, North-Central Lowlands, and Northeast Hills Ecoregions. In the North-Central Lowlands ecoregion, for example, McBride, Dewar, and Wadleigh (1979) and McBride, Wadleigh, Dewar, and Soulsby (1980) completed town-wide surveys of South Windsor and Glastonbury, respectively. In addition, town-wide surveys were completed in East Haddam and Haddam, e.g., Southeast Hills ecoregion, and in Woodstock, e.g., Northeast Hills ecoregion, in the early 1980s (McBride, Dewar, and Wadleigh 1979; McBride 1984), as well as while conducting the Route 6/1-84 Relocation Survey (McBride and Soulsby 1989). These investigations led to the creation of

several archeological phases that subsequently were applied to understand the prehistory of Connecticut.

The remainder of this chapter provides an overview of the prehistoric setting of the region encompassing the proposed project area. For the sake of ease and clarity, the chronology used below employs the standard period/subperiod that has characterized Connecticut prehistory for decades. However, when applicable, the identified archeological phases will be discussed to shed additional light on prehistoric settlement and subsistence patterns noted for particular period of time. Table 7 depicts the prehistoric cultural periods and various archeological phases of Connecticut as they have been presented in all major discussions of the area. The phase names and associated dates are adapted from McBride's (1984) unpublished dissertation entitled "*Prehistory of the Lower Connecticut River Valley*."

Paleo-Indian Period (12,000-10,000 B.P.)

The earliest inhabitants of the area encompassing the State of Connecticut, referred to as Paleo-Indians, probably arrived in southern New England after the end of the Wisconsin Glaciation (ca. 14,000 B.P.) (Gramly and Funk 1990; Snow 1980). At glacial maximum, sea level was as much as 130 m (426 ft) below its present level (Edwards and Emery 1977; Edwards and Merrill 1977), exposing a large portion of the continental shelf that was suitable for use by human populations that may have moved there from the west and southwest. By the time the glaciers receded from the area (ca. 11,000 B.P.), sea level was still much lower in southern New England than at present (Edwards

Table 7. Chronology of the Prehistoric Periods of Southern New England, including phases of the Archaic and Woodland Periods in Connecticut.

PERIOD	PHASE	DATE RANGE (YEARS BEFORE PRESENT - BP)
Paleo-Indian		12000 -10000
Early Archaic		10000-8000
Middle Archaic		8000-6000
Late Archaic		6000-3700
	Golet Phase	4700-4200
	Vibert/Tinkham	4200-2900
Terminal Archaic		3700-2700
	Salmon Cove	3600-2700
Early Woodland		2700-2000
	Broeder Point	2700-2000
Middle Woodland		2000-1200
	Roaring Brook	2000-1250
Late Woodland		1200-350
	Selden Creek	1250-450
	Niantic	450-350

and Emery 1977). While deglaciation occurred slowly, most of Connecticut was clear of ice by about 13,500 B.P., and the central portion of the state was inundated under glacial Lake Hitchcock (Bell 1985; Snow 1980; Gramly and Funk 1990). Megafauna that existed in the area at the time included mammoth, mastodon, horse, and bears, as well as elk, caribou, giant beaver, and musk ox (Gramly and Funk 1990; Martin and Guilday 1967; Ritchie 1969). Due to the presence of large Pleistocene mammals and the ubiquity of large fluted projectile points at this time, Paleo-Indians often are described as big-game hunters (Ritchie and Funk 1973; Snow 1980); however, as discussed further below, it is more likely that they hunted a broad spectrum of small and medium sized animals.

According to pollen studies, the tundra environment that developed shortly after deglaciation transformed rapidly into a forested biome, with a spruce forest in place by approximately 12,000 B.P. (Davis 1969). The spread of birch, pine, larch, and fir into the region, as well as limited amounts of oak, occurred by approximately 10,000 B.P. (Davis 1969; Thorson and Webb 1991). It was in this type of environment that Paleo-Indian culture flourished.

While there have been numerous finds of Paleo-Indian projectile points throughout the State of Connecticut, only two sites, the Templeton Site (6-LF-21) in Washington, Connecticut and the Hidden Creek Site (72-163) in Ledyard, Connecticut, have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980). Almost all other Paleo-Indian sites located in Connecticut are surface finds. Many of these occur within the limits of the former glacial Lake Hitchcock basin (Curren and Dincauze 1977), demonstrating that the lake had drained close in time to the arrival of Paleo-Indian groups in the area.

As mentioned above, the Templeton Site (6-LF-21), excavated by Roger Moeller (1980), is located in Washington, Connecticut; it is positioned on a terrace overlooking the Shepaug River. Moeller (1980:19) indicates that the site area was located approximately 3.4 m (11.5 ft) above the river, and that the site area was characterized by loamy fine sand. Carbon samples recovered during excavation of the site area produced radiocarbon age of 10,190±300 B.P., for the occupation; thus, the site was used sometime between 10,490 and 9,890 years ago. In addition to a single large and two small fluted

points, the Templeton Site produced graters, drills, core fragments, scrapers, and channel flakes, indicating that the full range of lithic reduction took place within the site area (Moeller 1980). Moreover, use of both exotic and local raw materials was documented in the recovered lithic assemblage, suggesting that the site's occupants also had access to distant lithic sources. Use of these distant sources provides evidence for some level of embedded procurement of lithic raw materials during movement from region to region.

The only other Paleo-Indian site studied in detail in Connecticut is the Hidden Creek Site (72-163) (Jones 1997). Identified in 1992, the Hidden Creek Site is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut. The site area is positioned on a kame terrace that overlooks a small tributary stream that drains into the Great Cedar Swamp. While excavation of the Hidden Creek Site produced evidence of both Terminal Archaic and Woodland Period components in the uppermost soil horizons, the lower levels of the site area yielded artifacts that have been attributed to the Paleo-Indian Period by Jones (1997). Paleo-Indian artifacts recovered from the site area include broken bifaces, side scrapers, a fluted preform, graters, and end scrapers. Jones (1997:76) argued that based on typological considerations the artifacts likely date from ca., 10,000 to 9,500 years ago.

Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represents a short-term occupation, probably in the range of 7 to 18 days in duration. Moreover, the distribution of artifact types and kinds of lithic debris indicate that discrete activity areas are discernible within the site area. Jones (1997:73-74) contends that separate lithic reduction and tool rejuvenation areas are indicated, and, since they were noted within an oval pattern, they are located within the confines of a former structure, possibly a skin tent.

While the evidence for Paleo-Indian occupation is scarce in Connecticut, combined with data from such sites as the West Athens Road and King's Road Site in the Hudson drainage, and the Davis and Potts Sites in

northern New York support the hypothesis that there was human occupation of southern New England by 11,000 to 10,000 B.P. (Snow 1980). Further, the site types currently known suggest that the settlement pattern is characterized by a high degree of mobility, with groups moving from region to region in search of seasonally abundant food resources, as well as for the procurement of high quality raw materials from which to fashion hunting and processing tools.

Archaic Period (10,000 to 2,700 B.P.)

The Archaic Period, first designated by Ritchie (1943) to describe all pre-ceramic cultures of the Northeast, began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980). Later, Griffin (1967) and Snow (1980) divided the Archaic Period into three subperiods: the Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). These periods were meant to describe all non-horticultural populations in the Northeast. Moreover, the populations lacked ceramic technology.

After additional investigations, northeastern archeologists added a final "transitional" Archaic Period, the Terminal Archaic Period (3,400-2,700 B.P.), which was meant to describe those groups that existed in the area just prior to the onset of the Woodland Period and the widespread adoption of ceramics into the toolkit (Snow 1980; McBride 1984; Pfeiffer 1984, 1990; Witthoft 1949, 1953). Although these divisions are used commonly by northeastern archeologists, McBride (1984) and others have found substantial temporal and stratigraphic overlap in the distribution of "diagnostic" artifact types, especially for the Archaic. As discussed in detail below, this overlap and the presence or absence of various cultural traits has led to the formation of several cultural phases for the Archaic Period of southern New England (McBride 1984).

Early Archaic Period (10,000 to 8,000 B.P.)

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969), have suggested the lack of sites of this age likely is tied to cultural discontinuity between the Early Archaic and preceding Paleo-

Indian Period, as well as a population decrease from earlier times. However, with continued identification Early Archaic sites in the region, and the recognition of the problems of preservation and visibility of these sites in New England (McBride 1984), it is difficult to maintain the discontinuity hypothesis (Curran and Dincauze 1977; Snow 1980).

In addition to the problems of differential preservation, Early Archaic Period occupations in southern New England, unlike other portions of the country (notably the Southeast), are difficult to identify. Like their Paleo-Indian predecessors, Early Archaic sites tend to be very small, and they produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified based on the recovery of a series of ill-defined bifurcate-based projectile points (Table 8). These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials, though some quartz and quartzite specimens have been recovered. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods of prehistory.

In Connecticut, a notable site that has produced stratified deposits dating from the Early Archaic Period is the Dill Farm Site in the lower Connecticut River Valley (McBride 1984; Pfeiffer 1986), and others (Barber 1980; Thomas 1980). Extrapolating from the Dill Farm Site, which dates from 8,050±90 B.P., and from regional surveys in the lower Connecticut River Valley, McBride (1984) has determined that Early Archaic sites generally are positioned within 0.2 km (0.5 mi) of the Connecticut River. This site distribution, combined with a shift in projectile point technology from large lanceolate points in the Paleo-Indian Period to shorter, more robust bifurcate-based projectile points suggests a "settling in" process occurred and that groups became more focused on locally

Table 8. Chronology of the Prehistoric Projectile Point Types for Southern New England.

PROJECTILE POINT TYPE	DATE RANGE (YEARS BEFORE PRESENT - BP)
Clovis	12000-9000
Bifurcate	10000-8000
Neville	8000-7000
Stark	7000-6000
Merrimac	6500-6000
Normanskill	6000-4800
Vosburg	6000-4300
Otter Creek	6000-4300
Lamoka	5500-3500
Brewerton-Eared	4800-4300
Genessee	4800-2700
Beekman	4500-4700
Bare Island	4300-2900
Poplar Island	4300-2900
Sylvan	4200-3500
Squibnocket	4200-3500
Wading River	4200-3500
Susquehanna	3900-2700
Oriental Fishtail	3900-2700
Perkiomen	3900-2700
Snook Kill	3900-2700
Wayland	3900-2700
Fulton Turkey Tail	2700-2000
Meadowood	2700-2000
Rossville	2700-2000
Steubenville	2700-2000
Snyders	2700-1200
Adena	2700-1200
Lagoon	2600-2100
Levanna	1200-450
Madison	1100-350

available and smaller game species. Occupations of this time period are represented by camps that moved periodically to take advantage of seasonally available resources (McBride 1984). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

Middle Archaic Period (8,000 to 6,000 B.P.)

By the onset of the Middle Archaic Period, essentially modern deciduous forests had developed in southern England (Davis 1969). It is at this time that increased numbers and types of sites are noted in the region (McBride 1984). The most well known Middle Archaic site in New England is the Neville Site, which is located in Manchester, New Hampshire and which was studied in detail by Dincauze (1976). The Neville Site produced the first evidence of a

Middle Archaic component that was stratigraphically intact and which could be dated reliably using the radiocarbon method.

Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. In fact, Dincauze (1976) obtained several radiocarbon dates from the Middle Archaic component of the Neville Site. The dates, associated with the then-newly named Neville type projectile point, ranged from 7,740±280 and 7,015±160 B.P. (Dincauze 1976; Table 8). Dincauze argued that the Neville projectile point, which is the oldest type of Narrow-Stemmed projectile point in the region (see below), is typologically similar to, but distinct from, the Stanley projectile point described by Broyles (1966) and (Coe 1964) at the St. Albans and Doerschuck Sites in the Southeast.

In addition to Neville projectile points, Dincauze (1976) described two other projectile points styles recovered from stratified contexts at the Neville Site that are attributable to the Middle Archaic Period. They are the Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P. She argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups.

As a result of the investigations at the Neville Site, Dincauze (1976) proposed that the Middle Archaic Period is characterized by the "Atlantic Slope Cultural Area," which is represented by the oldest, small or narrow stemmed projectile points in the region. This concept was devised by Dincauze (1976) to unite sites of this age from both the Southeast and Northeast into a single cultural unit, as well as to distinguish this area from other areas to the west of the Appalachian highlands.

During the late 1970s and early 1980s, McBride (1984) conducted archeological investigations in the lower Connecticut River Valley in an attempt to better describe the prehistoric settlement and use of the area. While radiocarbon dates are largely lacking, McBride (1984) noted that Middle Archaic sites in the

lower Connecticut River Valley tend to be represented by moderate density artifact scatters that produce examples of Neville and Stark projectile point types; Merrimac projectile points are largely lacking in the region. Further, archeological investigations in the area led to the determination that the lower Connecticut River Valley was occupied fairly intensively by Middle Archaic times, and that occupations identified in the area represent a "diversity of site types, with both large-scale occupations and small special purpose present (McBride 1984:96). As McBride (1984) has pointed out, Middle Archaic sites are distributed in both riverine and upland locales. Based on the available archeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

Late Archaic Period (6,000 to 3,700 B.P.)

The Late Archaic Period in southern New England is divided into two major cultural traditions that appear to have coexisted in the region. They include the Laurentian and Narrow-Stemmed Traditions (Funk 1976 McBride 1984; Ritchie 1969a and b). Archeological sites, cultural traits, settlement patterns, and land use patterns characteristic of these two traditions are discussed below.

The Laurentian Tradition (ca., 6,000 to 4,200 B.P.)

The Late Archaic of the Northeast was much more regionally diversified than either the Early or Middle Archaic Periods. This difference is attributed to environmental stabilization and population increases. The earliest Late Archaic sites in southern New England can be ascribed loosely to cultures of the Laurentian tradition (ca., 6,000 to 4,200 B.P.) (Dincauze 1974:48-49, Ritchie 1969a:233). They cannot, however, be strictly considered "Laurentian" because they lack many of the traits associated with that complex. Rather, they are local manifestations that rarely exhibit more than the diagnostic projectile point forms associated with the Laurentian Tradition (Snow 1980:219).

Artifacts assigned to the Laurentian Tradition include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights and scrapers. The diagnostic projectile point forms of this time period in southern New England include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a; Table 8). In general, the lithic assemblage of this tradition is characterized by flint, felsite, rhyolite and quartzite, while quartz was largely avoided as a raw material for stone tool manufacturing.

In terms of settlement and subsistence, archeological evidence in southern New England suggests that Laurentian Tradition populations consists of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been identified and studied, they generally encompass less than 500 m² in area. These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1984:252).

Subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones. While White-tailed deer comprised a prominent part of the diet, plant foods, including seeds and hickory nuts, were utilized. For example, the Bashan Lake Site, a Laurentian Tradition campsite located in East Haddam, Connecticut, has yielded evidence of Brewerton projectile points, net sinkers, grinding stones, hearths and charred hickory nuts dating from 4,730±280 years ago (Pfeiffer 1983:10).

The relative absence of storage pits and structural remains from the Laurentian Tradition occupations in southern New England indicates a lifestyle dominated by a high degree of mobility. Small groups of hunter/gatherers moved across the landscape in pursuit of seasonally abundant resources. An exception to this pattern is the Bliss-Howard Site discovered by Pfeiffer (1984:74-75). The Bliss-Howard Site, located in Old Lyme, Connecticut, is a cremation/occupation complex dating from approximately 4,700 years ago. At this site,

Pfeiffer (1984) identified 21 cremation burials with grave offerings including Brewerton projectile points, atlatl weights, axes, pestles, scrapers, faunal remains, and carbonized seed and nut remains (Pfeiffer 1984:74-75). Adjacent to the cremation cemetery is situated a large Laurentian Tradition occupation site. Pfeiffer (1984) argued convincingly that the habitation and cemetery were contemporaneous because artifacts found in these two contexts cross-mended in some cases. The cremation/occupation complex may have been a place where families aggregated for a period of time during the year. Large sites, such as Bliss-Howard and Bashan Lake, suggest that aggregations occurred for at least a portion of the year.

In his study of prehistoric settlement patterns of the lower Connecticut River Valley, McBride (1984) suggested the use of the term Golet phase to discuss occupation sites that have produced Laurentian projectile point types (e.g., Vosburg and Brewerton series). By obtaining radiocarbon dates from a variety of sites that produced Vosburg and Brewerton projectile points, McBride (1984) derived a time span of 4,700 to 4,200 B.P., for the Golet Phase. The evidence from occupation sites such as Bashan Lake and burial areas such as Bliss-Howard indicate that a significant population of hunter-gatherers inhabited the lower Connecticut River Valley during the early part of the Later Archaic Period (e.g., during the Golet phase). According to McBride (1984) Golet phase populations employed a settlement pattern that "appears to be very dispersed, with small mobile groups exploiting a wide range of microenvironments and environmental locales."

The Narrow Stemmed Tradition (ca. 4,200 to 2,900 B.P.)

The latter portion of the Late Archaic is dated between 4,200 and 2,900 years ago, and it is represented by local manifestations of the largest cultural tradition indigenous to southern New England and the mid-Atlantic regions (Dincauze 1975:47, McBride 1984:110). Known regionally as the Narrow-Stemmed Tradition, it is unlike the Laurentian Tradition; it likely represents a different cultural adaptation. The Narrow Stemmed tradition is recognized by the

presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984; Table 8).

In general, the Narrow-Stemmed Tradition corresponds to when Late Archaic populations in southern New England began to “settle into” well-defined territories. As mentioned above, the lithic industry of this period was dominated almost exclusively by the use of locally available quartz cobbles. The characteristic narrow-stemmed projectile points were manufactured using a bipolar reduction technique whereby a quartz cobble was crushed using a hammerstone and anvil to produce raw material for stone tool manufacture. Other tools found in Narrow-Stemmed Tradition artifact assemblages include choppers, adzes, pestles, antler and bone projectile points, harpoons, and awls, as well as notched atlatl weights. Many of these tools, notably the projectile points and pestles, indicate a subsistence pattern dominated by hunting and collecting of plant foods, especially nuts (Snow 1980:228).

In addition to terrestrial fauna and flora, evidence for the use of shellfish increased during the Narrow-Stemmed Tradition. For example, at the Archaic Midden site in Haddam, Connecticut, a Narrow-Stemmed Tradition site dating to $3\,990 \pm 60$ years ago, McBride (1984:112) recovered evidence for the use of freshwater clams, oyster, and quahog. Similarly, Ritchie has found abundant evidence for use of the same species on the Horn Blower II site on Martha's Vineyard. The date for the Horn Blower II site is ca., 4,000 years ago (Ritchie 1969b:38).

Further, Narrow-Stemmed Tradition settlement patterns are marked by an increase in the types of sites utilized. Whereas the Laurentian Tradition usually is characterized by smaller sites and higher mobility, the Narrow-Stemmed Tradition witnessed the introduction of large base camps supported by small task-specific sites and temporary camps. The introduction of these new site types suggests a more entrenched settlement pattern than that of the preceding Laurentian Tradition. This is evidenced by the archeological deposits at the Woodchuck Knoll Site (McBride 1978:124).

Woodchuck Knoll is a large Narrow-Stemmed Tradition base camp located on the floodplain of the Connecticut River in South Windsor, Connecticut. The associated radiocarbon dates for Woodchuck Knoll fall between 3,760 and 3,500 years ago. The site is particularly important for understanding Narrow-Stemmed Tradition settlement patterns because it demonstrates the re-occupation of a single area many times, something which was largely lacking during preceding periods. Moreover, Woodchuck Knoll exhibits the remains of numerous features, including hearths, caches and storage pits, all of which indicate a long term, perhaps multi-season, use of the site. This is particularly true of storage pits, which, until Narrow-Stemmed Tradition times, apparently were not utilized in southern New England. Storage pits at the Woodchuck knoll Site contained the charred remains of hickory, walnut, hazelnut, and *Chenopodium* sp., indicating a heavier reliance on local plant foods (McBride 1978:130).

In addition to the Woodchuck Knoll Site, many task-specific and temporary camps of the Narrow-Stemmed Tradition have been detected in almost every microenvironment in southern New England, including riverine areas, interior wetlands, upland streams, coastal zones, and lacustrine settings. These sites were utilized as support mechanisms for the larger base camps, such as Woodchuck Knoll. Further, they attest to a more well-established settlement pattern during the Narrow-Stemmed Tradition. While this pattern was well established, it still relied on frequent groups movement. The difference at this time is that group movements were made between areas that were frequented over and over in the past.

Based on recovered archeological evidence, McBride (1984) has suggested two separate phases for the Narrow Stemmed Tradition. They are the Vibert and Tinkham phases. The Vibert phase was identified first at the Woodchuck Knoll (McBride 1978), while the Tinkham phase was interpreted from archeological deposits encountered at the Tinkham Site in Tolland, Connecticut. In terms of temporally diagnostic tool types, the Vibert phase is recognized by the presence of small, triangular Squibnocket projectile points, while the Tinkham phase is

represented by the ubiquitous narrow stemmed projectile point. In addition, the Vibert and Tinkham phases were marked by the introduction of new and diverse site types, a heavier reliance on local plant foods, and re-occupation of and longer stays at base camps. These data suggest larger seasonal aggregations of people than the previous Golet phase, as well as decreased mobility. The increased number of temporary and task specific sites, especially those belonging to the Tinkham phase, indicates frequent movements out of and back into base camps for the purpose of resource procurement; however, the base camps were relocated seasonally to position groups near frequently used, but dispersed, resources (McBride 1984:262).

The Terminal Archaic Period (3,700 to 2,700 B.P.)

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England prehistory. Originally termed the “Transitional Archaic” (Witthoft 1953) and recognized by the introduction of technological innovations, e.g., broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for southern New England archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears to be a different technological adaptation, namely the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new lithic industry that was based on the use of high quality raw materials for stone tool production and a settlement pattern different from the “coeval” Narrow-Stemmed Tradition.

The Susquehanna Tradition is based on the classification of several BROADSPEAR projectile point types and associated artifacts. There are several local sequences within the tradition, and they are based on projectile point type chronology. Temporally diagnostic projectile points of these sequences include the Snook Kill, Susquehanna Broad, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride

1984; Pfeiffer 1984). Generally, the initial portion of the Terminal Archaic Period (ca., 3,700-3,200 BP) is characterized by the presence of Snook Kill and Susquehanna BROADSPEAR projectile points, while the latter Terminal Archaic (3,200-2,700 BP) is distinguished by the use of Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971; Table 8). There is much variation within the suite of artifacts within the Susquehanna Tradition, and, as a result, it should not be interpreted directly as a cultural system (Snow 1980:239).

The Susquehanna Tradition lithic industry was based on the use and modification of such raw material types as flint, chert, argillite, hornfels, rhyolite, and quartzite. Locally abundant quartz was avoided because of its poor fracturing qualities (McBride 1984:115-116). Thus, it can be said that the Narrow-Stemmed Tradition differs from the Susquehanna Tradition in technology, morphology, and raw material preferences. In addition, the material culture of the Terminal Archaic includes soapstone vessels, chipped and ground stone adzes, atlatl weights, drills, net sinkers, plummets and gorgets (Lavin 1984; McBride 1984; Ritchie 1969a and 1969b; Snow 1980), the most temporally diagnostic of which is the soapstone or steatite bowl. These vessels are shallow, have flat bottoms, are oval or rectangular in shape, have lugged handles at the narrow ends, and range from 12 to 50 cm (5 to 20 in) in length. The finished bowls are heavy and they demonstrate extended use; that is, many often have evidence of repairs (Snow 1980:240). It has been suggested that they are modeled after wooden prototypes (Snow 1980:240). The soapstone bowls tend to be found only at base camps along river terraces.

In the late Terminal Archaic there also is the appearance of interior cord marked, grit tempered, thick walled ceramics with conoidal bases; these ceramics occur in very minor amounts. These are the first ceramics in the Northeast and are named Vinette I (Ritchie 1969a; Snow 1980:242); this type of ceramic vessels appears with much more frequency during the ensuing Early Woodland Period. The adoption and widespread use of soapstone bowls, as well as the implementation of subterranean storage, suggests that Terminal

Archaic groups were characterized by reduced mobility (Snow 1980:250).

In addition, the recovery of soapstone bowls from numerous archeological sites in Connecticut indicates that local populations had access to and participated in regional exchange networks. For example, soapstone, or steatite, bowls appear to be tied into large inter-regional exchange networks that extended across the Northeast (Snow 1980:240). Moreover, the increased percentage of high quality lithics, e.g., chert, flint, felsite, etc., recovered from Terminal Archaic sites in the region also attests to the maintenance of long distance exchange networks, since these raw materials do not exist naturally within the borders of the State of Connecticut. As such, this is the best and earliest evidence of trade and exchange in southern New England. The majority of raw materials exchanged at this time can be found in riverine settings, and settlement along the major drainages would have facilitated trade.

There also are a large number of Terminal Archaic cremation cemeteries with burials that have produced broadspear points and radiocarbon dates between 3,700 and 2,700 B.P. (Pfeiffer 1990). Among the grave goods are ritually “killed” (intentionally broken) steatite vessels, as well as ground stone and flaked stone tools (Snow 1980:240); however, this represents an important continuation of traditions from the Late Archaic and it should not be regarded as a cultural trait unique to the Susquehanna Tradition (Snow 1980:244).

In addition, just as the artifact assemblage of the Susquehanna Tradition differed from Narrow-Stemmed Tradition, so too did settlement patterns. While Susquehanna Tradition settlement patterns are centered around large base camps that are analogous to that unearthed at the Late Archaic Woodchuck Knoll Site, they were located in a different ecozone: terrace edges overlooking floodplains. Terminal Archaic settlements generally are situated on river terraces with few, very small task specific upland sites located nearby (McBride 1984:282, Lavin 1988). Ritchie and Funk (1973), for example, noted that nearly all the Orient Fishtail components of the Susquehanna Tradition are located near seashores or along major rivers, usually in locations protected from prevailing

winds (see also Snow 1980:249). The Timothy Stevens Site is an example of such a large Terminal Archaic base camp in the Connecticut River drainage. This site, radiocarbon dated from 2,740±60 years ago, is situated on the edge of a terrace adjacent to the Connecticut River floodplain in central Connecticut. The site area has produced evidence of house remains, hearths, caches and storage pits, all of which area indicative of a large-scale, long term occupation (Pagoulatos 1988:76). Prolonged occupation of these sites may explain partially the changes in settlement from occupying the floodplain to moving up onto the terraces. That is, the terraces can be occupied earlier in the spring because they are not threatened by the annual spring flooding.

Acting as support facilities for the large Terminal Archaic base camps were numerous task specific sites and temporary camps. In general, these sites measure between 100 to 200 and 300 m² or larger in size, respectively. Such sites were used as extraction points for the procurement of resources not found in the immediate vicinity of the base camps, and they generally were located adjacent to upland streams and wetlands (McBride 1984:282). It is generally accepted that base camps were occupied from spring to fall in order to harvest anadromous and catadromous (migratory) fish runs, while interior sites were occupied during the colder months (Snow 1980:249).

While superficially it would appear those sites that have produced Susquehanna Tradition materials and sites containing Narrow-Stemmed Tradition materials were similar in nature, they were not. McBride (1984) indicated that settlement patterns associated with the Narrow-Stemmed Tradition, were characterized by large base camps, task-specific sites and temporary camps that were relatively evenly distributed across the landscape; they were ascribed to the above-referenced Tinkham phase. As mentioned above, Tinkham phase occupations appeared in all microenvironments, including riverine, upland, inland wetlands and lakeshores. Susquehanna Tradition settlements, on the other hand, which McBride (1984:278) argues belong to the Salmon Cove phase, were not so evenly distributed. That is, whereas Tinkham phase base camps sometimes occurred in upland

locales, Salmon Cove phase base camps appeared almost exclusively within riverine settings (McBride 1984:278). In addition, those Salmon Cove phase temporary camps and task-specific occupations located in the uplands were of short duration, long enough only to replenish supplies for the riverine base camps.

Unlike settlement patterns, however, Terminal Archaic Salmon Cove phase subsistence patterns were analogous to earlier patterns. The subsistence pattern still was diffuse in nature, and it was scheduled carefully. For example, food remains recovered from the Timothy Stevens Site included fragments of white-tailed deer, beaver, turtle, fish and various small mammals. Botanical remains recovered from the site area consisted of *Chenopodium* sp., hickory, butternut and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

Woodland Period (2,700 to 350 B.P.)

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery; however, as mentioned above, early dates associated with ceramics now suggest the presence of Vinette I ceramics appeared toward the end of the preceding Terminal Archaic Period (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been commonly divided into three subperiods: Early, Middle, and Late Woodland. In contrast, Snow (1980) has segmented the Woodland Period into two subperiods. He combined the Early and Middle Woodland to form the Early Horticultural Period (2,700 to 1,000 B.P.), while he renamed the Late Woodland into the Late Prehistoric Period (1,000-350 B.P.).

While Snow's (1980) reconfiguration of the Woodland Period is not without merit, it has met with resistance among southern New England archeologists, who continue in large measure to use the traditional three subperiod nomenclature. An exception to this rule can be found in McBride's (1984) study of the lower Connecticut River Valley, where he subdivides the Woodland period into four phases: the Broeder Point Phase (ca., 2,700 to 2,000 B.P.), The Roaring Brook phase (ca., 2,000 to 1,250

B.P.), the Selden Creek phase (1,250 to 450 B.P.), and the Niantic phase (ca., 450 to 350 B.P.). The latter phase typically is referred to as the "Final Woodland" period. The various Woodland subperiods and phases are discussed in detail below.

Early Woodland Period (ca., 2,700 to 2,000 B.P.)

The Early Woodland period of the northeastern United States dates from ca., 2,700 to 2,000 B.P., and it has thought to have been characterized by the advent of horticulture, the initial use of ceramic vessels, and increasingly complex burial ceremonialism, with the use of mounds to bury the dead in the Midwest (Dragoo 1967; Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland period are thick walled, cord marked on both the interior and exterior, and possess grit temper (Table 9).

In southern New England and New York, two different regional complexes have been described for the Early Woodland Period. They are the Meadowood Complex in New York (Ritchie 1969a) and the Lagoon Complex on Martha's Vineyard (Ritchie 1969b). Both are characterized by the presence of Meadowood and Rossville projectile points, settlement patterns focused on riverine and coastal settings, and thick grit-tempered ceramic vessels (Tables 8 and 9).

Table 9. Chronology of the Prehistoric Ceramic Types for Southern New England.

CERAMIC TYPE	DATE RANGE (YEARS BEFORE PRESENT - BP)
Vinette I	3000-2500
Windsor Cord Marked	2700-1200
Linear Dentate	2500-1800
Rocker Dentate	2000-1400
Windsor Brushed	1400-600
Sebonac Stamped	1300-500
Hollister Stamped	1250-450
Selden Island	1200-800
Windsor Plain	1200-450
Shantok Cove Incised	1100-850
Niantic Stamped	450-300
Hackney Pond	450-250
Shantok Castellated	350-250

In his study of the lower Connecticut River Valley, McBride (1984) identified a distinct phase for the Early Woodland Period. McBride (1984:294) named it the Broeder Point phase, and it encompasses the entirety of the Early Woodland Period (i.e., 2,700 to 2,000 B.P.). As described, the Broeder Point phase “is characterized by a quartz cobble lithic industry, narrow-stemmed points, an occasional Meadowood projectile point, thick, cord-marked ceramics, and perhaps human cremations” (McBride and Soulsby 1989:50).

Despite this description, data associated with Broeder Point phase sites are not recovered often; however, one of the best known sites of this phase is the Waldo-Hennessey Site in Branford, Connecticut (McBride 1984:125). Excavation of the site area revealed the presence of several small seasonal, and perhaps sequential, occupations situated adjacent to a tidal estuary. Careful investigation of the site area also resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of White-tailed deer, soft and hard shell clams, and oyster (McBride 1984:296-297). McBride (1984) argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features indicates that the site was reoccupied on a seasonal basis by a small, co-residential group.

In terms of regional settlement patterns, Broeder Point phase sites, like those of the Late Archaic Tinkham phase, are located in a variety of different ecozones; however, the largest settlements associated with this phase were focused on floodplain, terrace, and lacustrine environments (McBride 1984:300). Thus, while there is similarity to settlements patterns of the Tinkham phase, it is a superficial one. The main difference between the phases is that the Broeder Point phase is characterized by “population aggregations along major rivers, interior lakes, and wetlands” (McBride and Soulsby 1989:50), whereas Tinkham phase occupations reflect seasonal movements by smaller groups.

Despite this difference, McBride (1984:299) suggests that the Broeder Point phase was characterized by seasonal base camps only; that is, task-specific and temporary camps are largely lacking during this phase. This may

reflect two difference situations. First, such site types were not employed for the collection of resources, which seems unlikely. Second, Broeder Point temporary and task-specific sites are largely unrecognizable because of both their size and the fact that they do not produce the whole suite of Broeder Point technology, namely narrow stemmed projectile points and ceramics. If lacking the latter, such sites are likely to be misinterpreted as Tinkham phase occupations, which were characterized by the presence of narrow stemmed projectile points and the absence of ceramic technology. As a result, it is very likely that southern New England archeologists are misidentifying many Broeder Point phase sites, ultimately leading to the interpretation that the area was occupied by a population smaller than that of previous prehistoric periods (Dincauze 1974).

In terms of Broader Point phase occupations that have been identified and investigated in detail, McBride and Soulsby (1989:50-51) discussed five sites that were identified during the Route 6/I-84 expansion project. They indicate that the identified sites were “distributed fairly evenly between upland streams and interior swamps, and generally found less than 20 meters from a water source” (McBride and Soulsby 1989:50). Radiocarbon samples obtained from Sites 22-2, 19-6, and 12-2 returned dates of 2,380±210 B.P., 2,650±90 B.P., and 2,060±90 B.P., respectively (McBride and Soulsby 50-51). The sites produced multiple cultural features, as well as significant amounts of quartz debitage, including resharpening flakes, which indicate that both tool manufacture and maintenance activities took place within the limits of each site area. McBride and Soulsby (1989:51) argue that the recovered lithic assemblage is reflective of “woodworking, animal butchering, skin working, and plant processing activities.” In addition, the recovered faunal assemblage consisted of specimens of raccoon, snake, White-tailed deer, and hickory and walnut shell fragment. Their recovery, as well as the evidence for multiple cultural features and tool manufacturing and curation, suggest that the sites reflect multi-season use as base camps (McBride and Soulsby 1989:51).

In sum, archeological evidence collected by McBride (1984) during his dissertation research

in the lower Connecticut River Valley, as well as that noted by McBride and Soulsby (1989) during their survey of the then-proposed Route 6/I-84 expansion corridor, indicates that Broeder Point phase populations consisted a mobile hunter/gatherers that moved seasonally throughout a diversity of environmental zones in search of available plant and animal resources. As such, Broeder Point phase populations employed a foraging type of resource exploitation strategy, reflecting somewhat of a return to a Late Archaic lifestyle.

Middle Woodland Period (2,000 to 1,200 B.P.)

The Middle Woodland Period of southern New England prehistory is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). The latter indicates that regional exchange networks were operationalized once again, and that they were used extensively to supply local populations with necessary raw materials (McBride 1984; Snow 1980). Specifically, the recovery of certain types of chert and jasper indicate that Middle Woodland populations of the lower Connecticut River Valley had obtained raw material for stone tool manufacturing from the Hudson Valley (cherts) and eastern Pennsylvania (jasper) (George and Tryon 1996). Some authors have argued that the changes in ceramic technology and the increased reliance on regional exchange signified the beginning of a trend toward sedentism (McBride 1984; Snow 1980; Ritchie 1969a, 1969b); this argument is bolstered by the increased use of shellfish on the coast, as well as by the diversification of the diet to include additional types of wild plant foods and animal resources. These trends are discussed in more detail below.

In Connecticut, the Middle Woodland Period is represented archeologically by the Roaring Brook phase, which was defined by McBride (1984:134) during his investigations of settlement patterns in the lower Connecticut River Valley. In particular, McBride (1984:135) indicates that the Roaring Brook phase is marked by use of narrow stemmed and Jack's Reef projectile points; increased amounts of

exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types indicative of the Roaring Brook phase include Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200; Table 9). In addition, Lizee (1994a:200) has noted that shifts in Roaring Brook phase "vessel morphology include two contemporary forms: conoidal and elongated conoidal." He further indicates that this change was gradual and that it happened throughout the Roaring Brook phase; in addition to morphological changes, the Roaring Brook phase witnessed the first use of shell tempering in ceramic vessels (Lizee 1994a:200).

What this shift in ceramic technology reflects is difficult to say at present because large-scale investigations of Roaring Brook phase components have been conducted only infrequently. However, in his 1987 article, Braun suggested that changes in ceramic technology, specifically morphological evolution from conoidal toward elongated and globular with constricted necks, may represent a subsistence shift to include the use of starchy plant foods such as maize and/or other domesticated plant foods, e.g., *Chenopodium* sp., which required suspension of pots over fires rather than placement within a heating source. In addition, the addition of shell temper to ceramics has been demonstrated to reduce the amount of thermal shock to a pot that is put under slow boiling conditions such as would have been the case with the preparation of maize and other domesticated plant foods (Braun 1987).

In terms of settlement patterns, the Roaring Brook phase is characterized by the occupation of village sites by large co-residential groups. These sites were the principal place of occupation, and they were positioned in close proximity to major river valleys, tidal marshes, estuaries, and the nearby coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and

floodplains. The use of temporary and task-specific sites to support large village populations indicates that the Roaring Brook phase was characterized by a resource acquisition strategy that can best be termed as logistical collection (McBride 1984:310).

Late Woodland Period (ca., 1,200 to 350 B.P.)

The Late Woodland period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the Selden Creek and Niantic phases (McBride 1984). The Selden Creek Phase, which dates from ca., 1,200 to 450 B.P., is considered significant by Connecticut archeologists because it has produced the earliest evidence for the use of maize in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1973, 1974; McBride 1984; Snow 1980).

Lithic assemblages associated with Selden Creek Phase occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. McBride (1984:322) argued that lithic assemblages recovered from Selden Creek Phase sites typically contain approximately 20 percent non-local lithics at the beginning of the phase, whereas they reach densities of 60 to 70 percent by the end of the phase. Finished stone tools recovered from Selden Creek Phase sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980; Table 9).

In addition, ceramic assemblages recovered from Selden Creek Phase sites are as variable as the lithic assemblages. Ceramic types identified in Selden Creek Phase settlements include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947; Table 9). These types are more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216). Surface treatments of Selden Creek Phase ceramics include fabric impression, cord marking, smoothing, and brushing (Lavin 1980; Lizee 1994a; McBride 1984).

Further, ceramic vessel morphology underwent extensive changes during the Selden Creek Phase. For example, Selden Creek Phase vessels exhibit a more globular form, with rounded bottoms, constricted necks, and out-flaring rims becoming common. They also are thinner than their earlier counterparts, and they include collars and castellations, as well as some new forms of lip treatment. The use of shell tempering also became common and geographically widespread during the Selden Creek Phase (Lavin 1980; Lizee 1994a; McBride 1984).

In addition, as a result of his investigation of the distribution, size, and inferred function of archaeological sites in the lower Connecticut River Valley, McBride (1984:323-329) characterized Selden Creek Phase settlement patterns as more nucleated than the preceding Roaring Brook phase, with fewer, larger sites situated in estuarine and riverine ecozones. Both river confluences and coastal zones were favored for the establishment of large village sites that contain numerous hearths, storage pits, refuse pits, ceramic production areas, house floors, and human and dog burials (Lavin 1988b; McBride 1984). McBride (1984:326) has argued that these sites certainly reflect multi-season use, and were perhaps occupied on a year-round basis (see also Bellantoni 1987).

In addition to large village sites, McBride (1984:326) identified numerous temporary and task-specific sites in the uplands of the lower Connecticut River Valley and along the coastline. These sites likely were employed for the collection of resources such as plant, animal, and lithic raw materials. These sites tend to be very small, lack internal organizational structure, and usually contain a limited artifact assemblage and few cultural features, suggesting that they were occupied from only a few hours to perhaps overnight. Temporary camps, on the other hand reflect a longer stay than task-specific camps, perhaps on the order of a few days to a week, and they contain a more diverse artifact assemblage indicative of more on-site activities, as well as more features (McBride 1984:328-329). In sum, settlement patterns of the Selden Creek Phase in the lower Connecticut River Valley and adjacent coastline area are characterized by "1) aggregation in coastal/riverine areas; 2) increasing sedentism, and; 3) use of upland areas by small task groups of individuals organized for specific tasks" (McBride 1984:326).

In addition to the Selden Creek Phase, the Late Woodland Period encompasses the Niantic phase of Connecticut prehistory. The Niantic phase, sometimes referred to the Final Woodland Period, spans from ca., 450 to 350 B.P. (McBride 1984:145). While encompassing a short period of time, this phase is characterized by the continued increase in the reliance on non-local lithic raw materials for stone tool manufacture, use of maize horticulture, and a decrease in the number of ceramic types utilized. Projectile points characteristic of the Niantic phase are the Levanna type (McBride 1984).

In his dissertation research of the Windsor Tradition ceramics, Lizee (1994a) indicated that stylistic diversity in Niantic phase ceramics decreased, while the numbers and types of tools used to produce and decorate vessels increased. Lizee (1994a:233) argues that decreases in stylistic variation may reflect the consolidation of ceramic production techniques and decorative styles, with such changes possibly related to the evolution of tribal groups within the area. Lizee (1994a) also suggests that increased variety in vessel sizes during the Niantic phase may be attributed to shifts in ceramic vessel function.

Various vessel functions apparent at this time include cooking versus storage, among others.

It is important to note that numerous researchers have indicated that maize horticulture is a central feature of the subsistence pattern by Niantic phase times in Connecticut (Bendremer 1993; Bendremer and Dewar 1993; George 1997; Lizee 1994a; Lavin 1988; McBride 1984). This is consistent with Lizee's (1994a) arguments concerning ceramic treatments and the possible development of tribal entities at this time. Interestingly, however, Niantic phase settlement patterns are different from those of the preceding Selden Creek phase. While large village sites still are found in a multitude of eczones, including riverine, estuarine, tidal, lake, and coastal areas, smaller seasonal camps appear in the archeological record at this time. Such sites were absent during the previous Roaring Brook and Selden Creek phases, and their appearance represents a shift in land use patterns during the Niantic phase.

McBride (1984:337) argues that the small seasonal camps of the Niantic phase are located primarily in upland settings near streams and interior wetlands. This is in contrast to Selden Creek settlement patterns, McBride (1984), McBride and Bellantoni (1983), and McBride and Dewar (1987) suggest that this shift represents the dispersal of village populations at certain times of the year into smaller seasonal camps that likely were occupied by single families. McBride (1984:340) argues that this represents a return to a more mobile settlement pattern for the collection of resources; however, this shift occurs at a time when European contact with Native Americans first occurs and the trade in furs was initiated. Thus, the placement of seasonal camps in upland stream and interior wetland locations may be related to individual families moving to areas favorable to hunting beaver and other fur-bearing animals.

Summary

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence pattern, and land use strategies. For the majority of the prehistoric era, local Native American groups practiced a

subsistence pattern based on a mixed economy of hunting and gathering wild plant and animal resources. It is not until the Selden Creek phase that incontrovertible evidence for the use of maize horticulture as an important subsistence pursuit is available. Further, settlement patterns throughout the prehistoric era shifted from seasonal occupations of small co-residential

groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region containing the proposed project items, a variety of prehistoric site types may be expected. These range from seasonal camps utilized by Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV

HISTORIC SETTING

Introduction

The Town of East Hartford is located in the central portion of Hartford County and the North-Central Lowlands ecoregion of Connecticut. The towns in this county were among some of the first colonized areas of interior Connecticut; however, there also were settlement locations of Native Americans prior to and during the Contact period. The remainder of this chapter provides the historical context for the Area of Potential Effect, starting with its Contact Period Native American inhabitants the Podunk Indians and continuing through with a discussion of the historic use of the Rentschler Field area and its surroundings during the seventeenth, eighteenth, nineteenth and early twentieth centuries. These discussions provide a historical context from which to interpret the present condition and use of Rentschler Field, as well as its archaeological potential.

The Podunk Indians

At the time of first contact with Europeans, the Native Americans that dwelled on the east side of the Connecticut River in the East Hartford and South Windsor areas were known as the Podunks. According to historical texts, one of the primary Podunk village sites during the contact period appears to have been situated along the Podunk River, where it crosses from South Windsor into East Hartford. According to early land records from the area, the Podunk Indians retained the rights to some meadowland in the area, which was fenced off in 1650 for their use. In addition, the Podunk Indians also made extensive use of the Hockanum River valley in the area of what is now the center of East Hartford. It was in this area that they maintained a fortification upon what was called

Fort Hill (Goodwin 1886, 1879). According to Matthias Spiess, who made his interpretations of Podunk settlement types and patterns based on reports of artifact finds and burial locations, the Podunk Indians' two permanent villages were distinct from the numerous seasonal villages and camp sites that also existed in the project region. Spiess indicated that two Podunk villages were situated in the area: one in South Windsor and one "on the north bank of the Hockanum River in East Hartford, from Elm Street eastward to Lattimer Street and northward to the railroad" (Spiess 1937:2). The latter included Fort Hill. Other Podunk villages known to Spiess were located in Manchester, near Spencer Street in East Hartford, and "on Main Street in the southern section of East Hartford (Spiess 1937:3). Writing in 1937, Spiess asserted that the site of the latter village "...is now owned by the Pratt and Whitney Aircraft Company, and it is used as an aviation field," though he did not pinpoint exactly where in the field the occupation was located (Spiess 1937:3). At the time of Spiess' publication, the airfield consisted of an unpaved runway that was substantially smaller than it is today; at that point in time it encompassed only the westernmost portion of the current airfield (see discussion below).

A review of the historical records revealed that the Podunk Indians are best known for becoming embroiled in a bitter dispute with Sequassen, the sachem of Mattatuck Indians who lived in the vicinity of what is now Middletown. This dispute erupted in 1656-1657, and it was centered around the murder of a Mattatuck Indian by a member of the Podunk Tribe. In order to settle the disagreement, Sequassen petitioned Uncas, sachem of the Mohegan Indians and the most prominent Native

American in Connecticut at the time, as well as the governor of the Connecticut Colony in an attempt to mediate the dispute. Unfortunately, he met with little success. According to reports by local colonists, the Podunks and the Mohegans seem to have been approximately equal in manpower at that time so a threat of a direct assault by the Mohegans carried little weight. Instead, Uncas secured the surrender of the Podunk murderer by convincing the Podunks that the Mohegans had entered into an alliance with the much more dangerous Mohawks to destroy the Podunk tribe (Barber 1836). While this dispute was apparently resolved, the Podunk Indians continued to meet with discord from their European neighbors and problems with Uncas. Also in 1657, a commission appointed by the colony ordered Uncas to allow the Podunks to return to their homes unmolested, which they apparently had fled (Goodwin 1879). As a result of a Podunk request in 1659, the General Court of Connecticut specifically ordered that the colonists of the region were not to “molest” the Podunks in the peaceable enjoyment of their lands (Public Records of the Colony of Connecticut, Vol. 1, Pg. 344). This also represented an attempt by the government to prevent colonists from encroaching on Indian lands and causing further conflicts. Still, disagreements continued and the Podunks appeared before the Colony magistrates on several occasions throughout the 1660s, at which time they were described as being “restless.” It is likely not a coincidence that at about that time the colony took on the task of mediating a boundary settlement between the Podunks and the Mohegans. In addition, a complex dispute among one Thomas Burnham, the Podunks, and the colony government over a sale or lease of land from the sachem Tantinomo to Burnham continued to simmer during this period; unfortunately, it is not known where this land was located (Goodwin 1879). Thus, in this context, the restlessness may have referred to the Podunks’ feeling it was time to move their main villages away from their encroaching white neighbors, to which the colony was strongly opposed. Because of the possibility of violent reaction to colonial policy, the colonial authorities felt it necessary to try to settle these problems.

In sheer numbers, the Podunks were a substantial group up to the time of King Philip’s War in 1675-1676. Although DeForest (1852) claimed the group supplied only 60 warriors to the war campaign against the colonists, other historical sources contemporary to the war claim that 200 to 300 Podunk warriors were fielded. Extrapolating from the number of warriors recorded at the time, Spiess suggested that the overall Podunk population may have been as high as 1,500 during the latter decades of the seventeenth century (Spiess 1937). With a colonial victory over King Philip and his allies, the Podunks were largely dispersed. This dispersal is most likely related to fleeing colonial vengeance, which in many instances resulted in capture and sale into slavery. According to Goodwin (1879:34), only a “ragged remnant” of the Podunk Tribe remained in 1677, when a dispute about their surviving lands came before the General Assembly. The last mention of a Podunk Indian in the colonial records was in 1722 (Goodwin 1879:34).

From an ethnohistorical perspective, it should be noted that the assertions of the immediate disappearance of the Podunks rests in large measure on patriarchal assumptions; that is, because most of the men did not return from the war, pre-twentieth century observers believed the group effectively ceased to exist at that time, no matter how many women and children remained in the area. DeForest (1852:363) reported that “[a] remnant of the Podunk nation, living on the Hockanum River, remained in East Hartford as late as 1745, but in 1760 had entirely disappeared.” During the eighteenth century, most surviving Native Americans in central and eastern Connecticut, denied access to adequate lands and suffering from severe discrimination, moved westward and joined with other tribes. Goodwin reported, also, that “within the memory of some of our older citizens” there were some Indians living in the Burnside section of town, with a “chief” named Tobias or Toby, and in 1793 a doctor was compensated for medical treatment for an Indian woman there (1879:37). In addition, Goodwin discusses a Revolution-era report of a wigwam located the south to of Silver Lane, which is discussed in more detail below. Thus, there may have been a few Native Americans still in the

town at the time of the Revolutionary War and in the early nineteenth century. This is not unusual in the history of Connecticut, as many towns have reports of a small number of Native Americans still living within their borders even into the late nineteenth century, often reported as 'local character' anecdotes in antiquarian histories.

History of the Town of East Hartford

The Town of East Hartford was separated from Hartford in 1783, and it included the present town of Manchester until the latter was established in 1823. As is commonly known from historical sources, Hartford is the capital of Connecticut and one of the first three towns established in the Connecticut Colony. The first European settlers at Hartford, however, were not Englishmen, but were of Dutch descent. These early European settlers were traders who moved northeast from the colony of New Netherlands (now New York) to expand their foothold on the fur trade in New England. After a favorable report of the location in 1614 by Adriaen Block, who sailed up the Connecticut River, Dutch traders erected the "House of Hope" in 1623 at the site of what would later become Hartford. The Dutch enjoyed unencumbered trade with local Native American groups for about a decade until, in 1633, English explorers first reconnoitered the area for a place of settlement. Within a couple of years the English moved a small group of colonists from Newtown (now called Cambridge) in the Massachusetts Bay colony to the Hartford area. While only a few colonists initially moved to the area, a large party led by the Reverend Thomas Hooker arrived in the region in June of 1636, which is often referred to as the founding date of Hartford. Reverend Hooker and his followers, like the Dutch before them, also made purchases of land from the Indians of the area. For some years thereafter, the Dutch and English were uneasy neighbors, with the more numerous English making difficulties for the Dutch on a variety of pretexts. Around 1650, at a time when the mother countries were at war, the English confiscated the Dutch fort at Hartford and all of its goods (Trumbull 1886), thereby removing the Dutch presence in the area.

From a land transfer perspective, historical sources indicate that the founders of Hartford made purchases from the Indians of all land settled by the English colonists; however, those records pertaining to the purchase of lands in East Hartford have been lost to history. Their former existence has been imputed from references in the early land records, which place the initial boundaries of Hartford on the east side of the Connecticut River and extended some three miles eastward from its bank line. Accordingly, the initial purchase of the Hartford area by the English would have encompassed the current project area. For example, it is reported that in 1637, the Podunk sachem Arramamet was one of 10 signatories to a sale of land located on the east bank of the Connecticut River between the Scantic River and the Podunk River; however, the actual text of this deed has not been not reported. It has been reported that he continued, successfully, to claim lands in South Windsor and East Hartford, which he willed to his daughter in 1672. This is, of course, in accordance with English notions of land ownership by an individual sovereign, not Native American ones.

Further, in 1672, the town limits were extended an additional five miles to the east based on an additional purchase of Indian land from the sachem Joshua, husband of Arramamet's daughter, which was finally secured by a deed from Joshua's administrators in 1682. According to historical sources, the meadows lying adjacent the Connecticut River were allocated to the proprietors of Hartford prior to 1640, while the rest of the initial three miles to the east of the river was divided in and after 1640. The part of town located to the south of the Hockanum River was known as "Hockanum" at that time, while the northern part was referred to as "Podunk" (Goodwin 1886, 1879). Main Street, which extends parallel to the course of the Connecticut River, was laid out in 1670, and the settlers of the area eventually built a bridge over the Hockanum River in 1700. It should be noted that Main Street was laid out on the Connecticut River terrace and not within the meadows. This was probably done to avoid springtime flooding of the road. A second major thoroughfare in the

vicinity of the proposed project area, Silver Lane, was officially laid out in 1728, although it had been in use prior to that time. According to historical records, the town took deeds to the three-rod (49.5-foot) road from nine landowners in 1731. Even before these infrastructural improvements were being undertaken for the benefit of Hartford and its residents, the process of separating from East Hartford from Hartford had begun with a petition to form a new ecclesiastical society in 1694, which was known as the Third Ecclesiastical Society of Hartford. In 1708, the Society petitioned the General Court to let it establish a school on the east side of the Connecticut; however, this did not actually come to pass until 1718, when two schools were built in the area, one in the north and one in the south of the town. The General Assembly made new provision for education in 1796 by creating “school societies” out of the old ecclesiastical school organization, with funding from the sale of land that Connecticut claimed west of Pennsylvania (Goodwin 1886, 1879).

During the Revolutionary War, the East Hartford participants were still counted among those representing Hartford, as the towns were still one. In addition, in 1781 the army of Count Rochambeau, on its way to assist the Continental Army, encamped in East Hartford on Silver Lane. Rochambeau’s participation in the War of Independence was the result of a 1778 alliance between the King of France and the rebel British subjects in America. France’s King took this opportunity as a way to exact revenge from his rival the King of England. Even before the alliance, however, France had supplied the American rebels with ordnance and experts to operate it, as well as (unofficially) experienced military leaders such as the Marquis de Lafayette. In 1780, Louis XVI made the decision to send an actual army to America. This force was led by Jean Baptiste Donatien de Vimeur, comte de Rochambeau. He commanded some 4,000 infantrymen (four regiments), approximately 500 artillerymen, engineers, and approximately 600 men representing the *Légion de Lauzun*, together with a variety of medical staff, servants, and supply staff. The French force totaled approximately 6,000 in all.

The French army arrived at Newport, Rhode Island in July 1780, but it did not begin to march southward to the eventual victory over the British at Yorktown until the next year. The portion of the French army led by Rochambeau, which departed from Newport in early June of 1781, consisted of approximately 2,900 enlisted men and 450 officers (Selig 1999). The army marched in several columns, each traveling a day or so apart. They began to arrive at what is known as Camp 6 in East Hartford on June 22, remaining there until the June 25. On the return journey in 1782, the army arrived at Camp 45 in East Hartford on October 29, and departed on November 4 (Crofut 1937). The difficulties in identifying the exact locations of these camps are substantial, as various sources supply conflicting information about their locations, sometimes within the same source. Forbes wrote that Camp 6 was “not far from the Connecticut River,” and also that Camp 45 was “on Silver Lane, a trifle farther southeastward than on the previous visit” (Forbes 1925:141 & 157). Detailed colored plans of each camp were made at some point afterward. The plans were based on sketches made at the time of encampment; they were subsequently reproduced in Rice and Brown’s 1972 publication entitled *The American Campaigns of Rochambeau’s Army, 1780, 1781, 1782, 1783*, which helps to locate them more accurately. As Rice and Brown’s figures indicate, Rochambeau’s “camps” were not single locations but actually multiple emplacements. In their maps, Rice and Brown (1972) identify the infantry units are represented by rectangles with small triangles on one side (colored yellow in the original), while the artillery units are smaller rectangles or squares, again with a triangle on one side (colored red in the original).

Camp 6, made by Rochambeau and his army on the southward journey in 1781, apparently involved one infantry unit that camped on the north side of Silver Lane and two others that were located much closer to the Connecticut River (Rice and Brown 1972; Figure 11). The Silver Lane encampment held the division known as the Soissonnais, while the river encampment was occupied by the Bourbonnais and Royal Deux-Ponts divisions (Selig 1999). General Rochambeau himself stayed at the home of Eliza

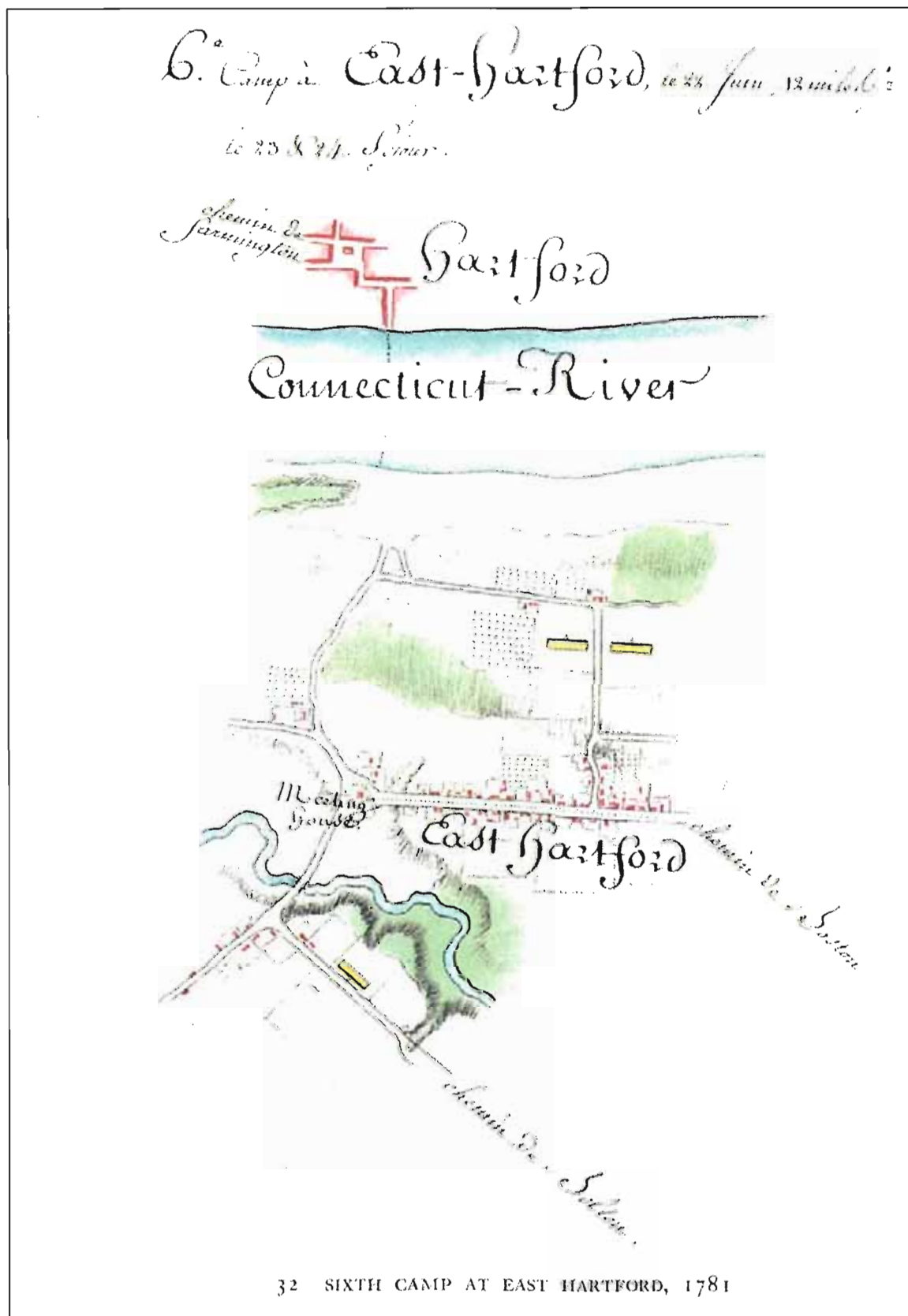


Figure 11. Plan of Rochambeau's 6th camp in East Hartford, reprinted in Rice and Brown (1972).

Pitkin, while his officers occupied other private houses and inns in the vicinity; the local meetinghouse was used as a hospital, while the residence of James S. Forbes on Forbes Street briefly held the soldiers' pay before it was distributed to the soldiers. This incident is believed to have given rise to Silver Lane's name, as the payments to the French troops were made

in silver (Goodwin 1879). Camp 45, which was established in 1782, was situated somewhat further south than Camp 6 (Rice and Brown 1972; Figure 12). The infantry and artillery units at Camp 45 encamped both north and south sides of Silver Lane at an unknown distance from the proposed project area. As these encampments held thousands of men, they undoubtedly covered

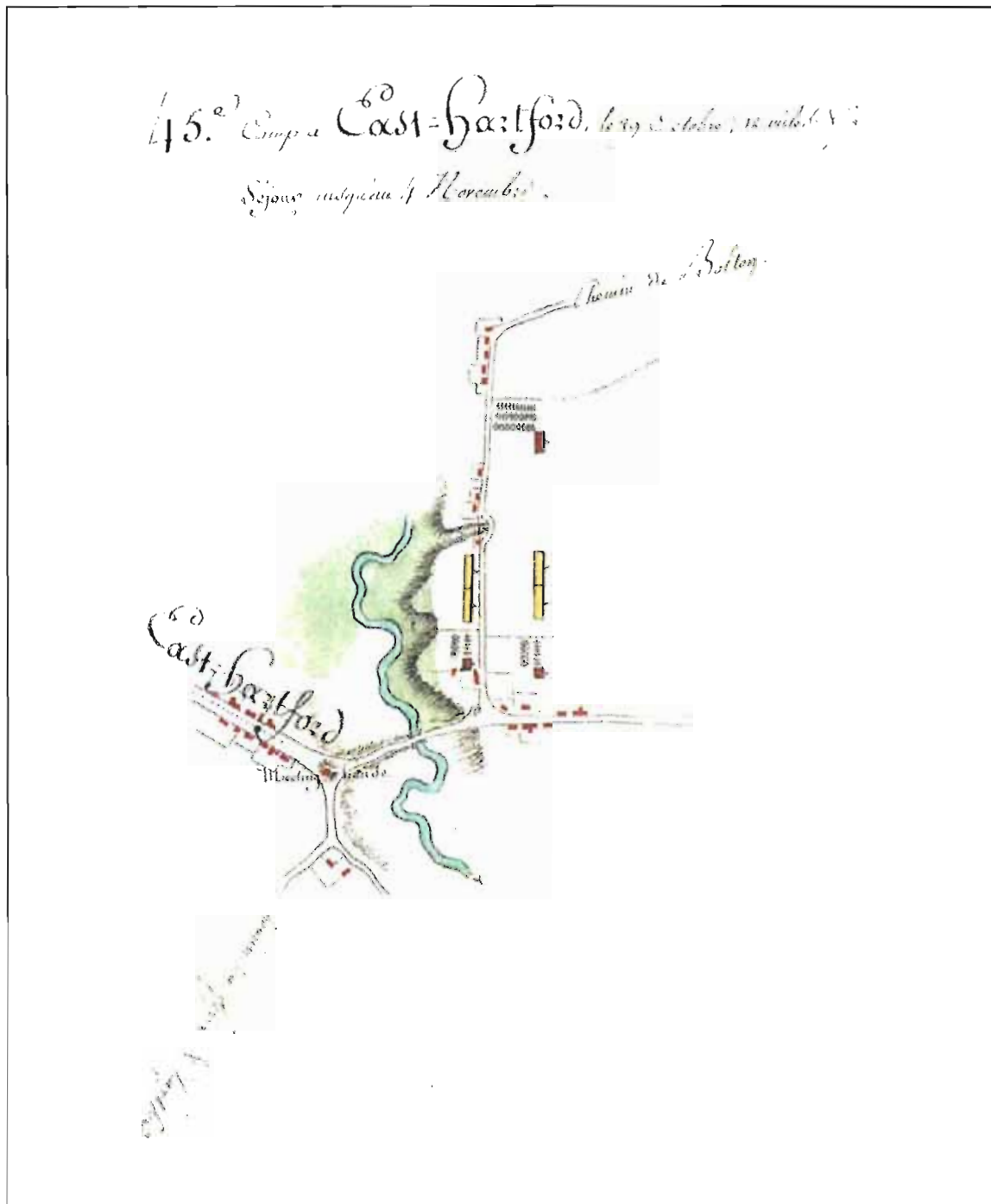


Figure 12. Plan of Rochambeau's 45th camp in East Hartford, reprinted in Rice and Brown (1972).

a considerable amount of acreage. The estimated locations and sizes of these camps were established in 1999 and the area depicted in Figure 13 (Keegans Associates 1999). The encampments appear to have been located to the east of the Area of Potential Effect.

In 1783, after the Revolutionary War had ended, East Hartford finally was incorporated as a separate town, having made its first such petition nearly 60 years earlier in 1726. In a 1769 petition, which was signed by 156 people, local leaders

indicated that the town's property was worth £17,000. By the time of the 1774 petition, the town's population was listed at 2,000 people with a total property value of £19,000. The first town meeting was held in November of 1783 (Goodwin 1879). Throughout the latter portion of the eighteenth century and the first half of the nineteenth century, East Hartford was typical of most towns located in the Connecticut River valley. That is, its population was dispersed for the most part and constituted largely of farming

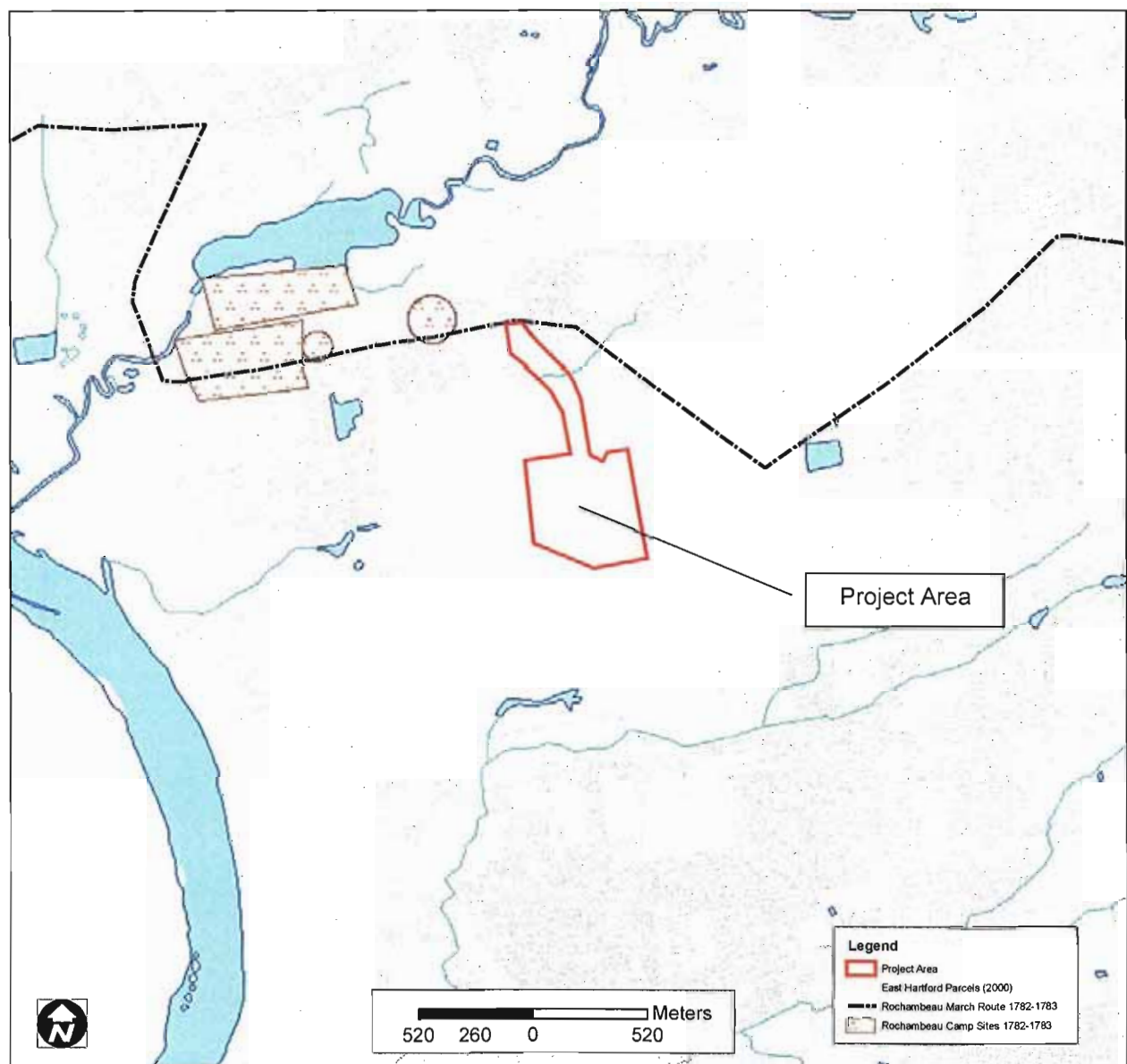


Figure 13. Reconstruction of location of Rochambeau encampments, with project area overlay (Keegans Associates 1999).

families that made their living from the land. In addition to these families, the town possessed several mercantile operations, including saw mills, grist mills, and small manufactories of all sorts. During this period the town developed under largely peaceful conditions; that is, until the Civil War commenced and involved the local population.

During the Civil War, 311 men representing East Hartford served, with two-thirds of them being volunteers. In addition to volunteers, the town also helped draftees pay for substitutes (Goodwin 1886). As mentioned above, East Hartford industrial endeavors, as was typical of most Connecticut towns, began with necessary activities, including grist mills, saw mills, and fulling mills (the latter being used to process homespun cloth). Some of these operations had a long standing history in the region and according to reports, seventeenth century East Hartford was well provided for with white and yellow pine for a variety of construction needs. In addition, the Hockanum River (also called the Saw Mill River) was documented as a very good source of waterpower; the key to its importance was that it was small enough for the technology of the time to harness. According to Goodwin (1879), a paper mill was built in the Burnside district in 1784 (earlier ones were established in 1775 in what is now Manchester). In the western end of town, powder mills, which were used for the making of gunpowder, were constructed in 1775 and they continued in operation under various owners through the 1870s.

In addition to manufacturing necessities and military related articles, the people of East Hartford also participated in the temporarily popular silk industry from the 1780s thorough the 1830s; however, unsatisfactory yields caused it to be abandoned. By 1819, the town's production base also had expanded to include a hat factory, four wool carding machines, and a variety of other industries (Goodwin 1876). Many of these manufactories relied on the local stream and rivers for their power. In fact, in the 1830s, Barber described the Hockanum River as "[a]n excellent mill stream," along which manufacturing was "carried on to a very considerable extent" (Barber 1836, 72-73). At that time, there were five paper mills at the village called Scotland (later Burnside) (Barber

1836). More specific to the proposed project area, nearby Willow Brook was once used to power a nail mill and a tannery; however, both had closed by the 1870s. Although in 1879 East Hartford still had paper mills and the powder mills (said to be idle at that time), the Willow Brook or Second South District had only general stores, two tobacco warehouses, one blacksmith and a single wagon shops. While during the late nineteenth century, the occupation of farming, especially of tobacco, was the main source of income for the town's residents, the Willow Brook district also had a thriving shoemaking business (Goodwin 1876). This business was centered on the Silver Lane area; however, like many other commercial ventures in the area, it eventually declined and was replaced by tobacco farms (see below for a discussion of tobacco farming in Connecticut). The soil of the area was highly fertile, encouraging continued reliance on agriculture (Paquette 1976). According to Barber (1836:72), the meadows along the Connecticut River "contain[ed] an extensive range of some of the best land in the State." It is likely that the very proximity of Hartford's burgeoning population encouraged many East Hartford residents to concentrate on supplying farm goods to that city. Indeed, Goodwin noted in 1886 that it "affords a good market for fruit, vegetables, etc., and its tobacco warehouses, together with those on this side of the river, furnish a ready market for the excellent tobacco that is grown in the town" (99).

Tobacco Farming in Connecticut

Much of Rentschler Field was used for tobacco farming during the early twentieth century, and possibly earlier according to historical texts. Although in colonial Connecticut tobacco growing was not the overwhelmingly important activity that it was in more southern colonies, it was an important cash crop in the Connecticut River Valley by 1700. This was especially true in the nearby Town of Windsor where records from 1739 indicate that "some '221 weight'" of tobacco was sold by a local resident to Barbados. Between 1744 and 1767 another Windsor man sold thousands of pounds to the West Indies and to traders in Boston. In one of the earliest records of tobacco sales, a 1704 document "showed that tobacco was one of the principal articles of trade

between Wethersfield and the West Indies” (McDonald 1936:5). The late eighteenth century saw a decline in production caused by the various wars and competition from Virginia, but after the Revolutionary War it recovered and in 1801 the valley produced 20,000 pounds, the largest crop up to that date. In 1810, cigar making began at East Windsor and Suffield, and by 1830 a new way of curing tobacco for cigar wrappers called “sweating” was discovered by an East Windsor company. After that, all or most of the industry shifted to producing for cigars, and high profit margins encouraged farmers to try their hand at growing it from the Housatonic valley to New Haven and as far north as Vermont and Maine. By the late nineteenth century, however, competition and overproduction brought about a gradual decrease of acreage, until only the “best lands in the immediate vicinity of the Connecticut river continued to be used,” presumably because those lands produced the highest yield (McDonald 1936:14).

An improvement in tobacco production, which occurred in 1896, was the development of a method for growing “shade tobacco,” which consisted simply of building light cloth tents on poles over the plants. This caused the tobacco leaves to take on a more pleasant color, and the technique rapidly spread throughout the market. It resulted in significant increases in the grower’s profit base. While in 1907 only 70 acres throughout New England were planted this way, by 1919 there were 3,900 acres so planted in Connecticut alone. The Connecticut crop was valued at \$4,830,000.00. Between 1923 and 1936, the value of the tobacco crop was over 33 percent of the total value of Connecticut agricultural products (McDonald 1936). In 1950, nearly 20,000 acres of tobacco were cultivated in Connecticut; however, during the 40 years between 1950 and 1990 the acreage declined to less than 2,000. Nonetheless, because the market price of tobacco had increased dramatically, “the annual crop from this reduced acreage is actually worth twice as much as it was in 1950” (Cunningham 1995:106). Tobacco drying sheds (better known to non-growers as “tobacco barns”) are still a common sight on the landscape, and, as discussed in more detail

below, they are visible in historic aerial photographs of Rentschler Field.

In addition to these physical features, tobacco production left cultural impacts as well. A 1943 Federal report on Connecticut’s tobacco industry indicated that 900 of the 1,045 migrant workers in the state (about 17 percent of the overall the labor force) were African-Americans “and mostly high-school and college students recruited through southern colleges,” while one-third were children from Connecticut and Massachusetts. Living and working conditions, especially for the African-American workers, were considered poor (Hall and Harvey 1995: 585). By the 1970s, a quarter of the migrant workers were from Puerto Rico, and while many, if not most, of both groups moved on, some also stayed and altered the ethnic makeup of the Connecticut River Valley (Cunningham 1995). It is conceivable that some of the residences used by tobacco workers referred to by Hall and Harvey (1995) may have been located within or near the project area, but there is no direct historical evidence of that.

Pratt & Whitney Aircraft Corporation

The formal ownership of the larger part of the Rentschler Field complex, including the Area of Potential Effect, passed through various corporate hands during the twentieth century. In 1935, for example, it was purchased by United Aircraft Manufacturing Corporation, which received it from The United Airports of Connecticut, Inc., which had bought it from The Pratt & Whitney Aircraft Company in 1929. The latter transaction occurred almost immediately after Pratt & Whitney purchased the land from a large number of individual landowners (East Hartford Land Records, Vol. 110 Pg. 596 and Vol. 100 Pg. 104). Pratt & Whitney originally was founded in Hartford, but the company moved to East Hartford when it bought approximately 600 acres of land in 1929, mostly tobacco fields (Paquette 1976). In particular, The Pratt & Whitney Aircraft Company was created in 1925 via the Hartford company Niles-Bemont-Pond called the Pratt & Whitney Tool Division, from which Frederick B. Rentschler received initial financing and facilities for building his revolutionary Wasp engine, which powered a

large number of America's military planes.¹ The new company's ability to purchase such a large amount of land, and break ground in the week after most of the deeds were signed, testifies to the immediate success of the Wasp engine, orders for which were pouring into Pratt & Whitney. At the dedication of Rentschler Field in May of 1931, there were 15,000 guests in the audience who assembled there to see army plane maneuvers; 600 of the guests also were invited to a formal luncheon. Over the years, Pratt & Whitney has manufactured a wide variety of successful aircraft and hosted celebrity flyers ranging from Amelia Earhart to Howard Hughes to Charles Lindbergh (Paquette 1976).

Frederick Rentschler, the namesake for Rentschler Field and the driving force behind the Pratt & Whitney Aircraft Company, began his industrial career at his father's oil and steam turbine manufacturing company in Ohio after graduating from Princeton University in 1909 with a liberal arts degree. During World War I, he enlisted in the armed forces and worked as a supervisor overseeing Army aircraft production in New York; it was this job that sparked his interest in airplane engines (Bingham 1962). In 1919, Rentschler was one of the organizers of Wright Aeronautical Corporation in New Jersey, which saw some success in revised versions of the Hispano-Suiza engine as well as the Wright T liquid-cooled engine and the air-cooled radial engine R-1 during the 1920s. He became president of the Wright Aeronautical Corporation, but ultimately resigned in late 1924 because the board of directors was unwilling to finance the research and development activity that he felt necessary for long-term success. The move to Hartford occurred because of Rentschler's father's friendship with the president of Niles-Bement-Pond, James K. Cullen, who facilitated Rentschler's introduction to the leaders of his company's subsidiary Pratt & Whitney Tool. In addition, both Pratt & Whitney Tool and Hartford had excellent reputations in machining and manufacturing. It was \$250,000.00 in funding

from Pratt & Whitney Tool that made Pratt & Whitney Aircraft a possibility. The Wasp engine, the foundation of the company's success, first was flown on May 5, 1926, and it was being produced in volume for the Navy by February 1927. The company soon added the Hornet, which tested ready in March of 1927.

A little more than two years later, these high quality, reliable, revolutionary engines led to the construction of the \$2 million, 400,000-square-foot East Hartford facility and adjacent airfield. The company's business model also was unusual; Frederick Rentschler and the other founders determined to subcontract at least half of the work on the engines as a way of keeping the main company lean and economically resilient. The company culture was informal and dominated by engineers and machinists, and it deliberately sought to promote capable men from within its own ranks (Pratt & Whitney 1950). During the 1930s, the company had some 3,000 employees, a fraction of the number it later boasted. It added 100 new employees in 1933 as part of the National Recovery Administration program to increase employment opportunities (Paquette 1976). Another initial boost to the company (or is subsidiary United Aircraft & Transport Corporation) came from government airmail contracts, which nonetheless began to decline in the mid-1930s due to funding issues and a Senate investigation (see below) (Bingham 1952).

Pratt & Whitney's East Hartford development plan included the employment of the Hartford real estate firm W. A. Sanborn & Company, which obtained options on the various parcels before arranging their final purchase in July 1929 (*Hartford Daily Courant* 1929). The company broke ground for the facility on July 16, 1929, mere days after most of the land purchases had been finalized (Paquette 1976). The new plant on Main Street, nicknamed "the bee-hive" like its predecessor, began operations on December 30, 1929, after a moving process that began on December 25 and involved both trucks and trolley cars to get the machinery from Hartford to East Hartford. At that time, the airfield had not yet been constructed. An aerial photograph published in the 1930 Pratt & Whitney company newsletter shows the production facility at that time, which measured 500 feet in width and 1,500 feet in length; Willow

¹ This Pratt & Whitney Tool Division went on to become the present Pratt & Whitney Measurement Systems, Inc., which should not be confused with the Pratt & Whitney Aircraft Company. This report's references to "Pratt & Whitney" always mean the aircraft company, unless otherwise specified.

Brook alois visible in the upper left-hand corner and the site of the future airfield, and the proposed project area in the upper right-hand corner (Figure 14). The tobacco field outlines and tobacco sheds are clearly visible in the photo as well (*The Bee Hive* 1930).

The dedication of Rentschler airfield took place on May 24, 1931, in the midst of a major tour of the United States east of the Mississippi by the United States Army Air Corps, part of which visited the field for the occasion. An aerial photograph of the field on that day shows the original hangars and numerous planes lined up on the adjacent grass airstrip, which was much smaller at that time (*The Bee Hive* 1931; Figure 15). As the photograph indicates, this airfield initially consisted of 165 acres of leveled turf, with only one runway. The fields beyond were white because of the shade tobacco tents that had been erected to protect that year's fledgling crop. In a subsequent 1934 aerial photograph of the area, it is clear that several types of

microenvironments comprise the Area of Potential Effect (Figure 16). The Area of Potential Effect extends to the south from Silver Lane in a narrow band, including what were probably one or two houses and a tobacco shed, then crosses some well-defined agricultural fields and a wooded area. The larger southern section of the Area of Potential Effect includes part of the airfield on the west, some wooded areas and fields to the north, and agricultural fields to east; in the center there are some patches of thin vegetation and generally irregular terrain. Possibly this area was in the midst of being leveled, or else was still in its natural state. The original appearance of the airfield is also shown in Figure 15, in which planes are visible lined up on the field to the left and the original hangars (located immediately adjacent to the new factory and visible in the 1934 aerial as well) on the right.

Another important event in the history of the company, which occurred in 1929, was the organization of United Aircraft and Transport,

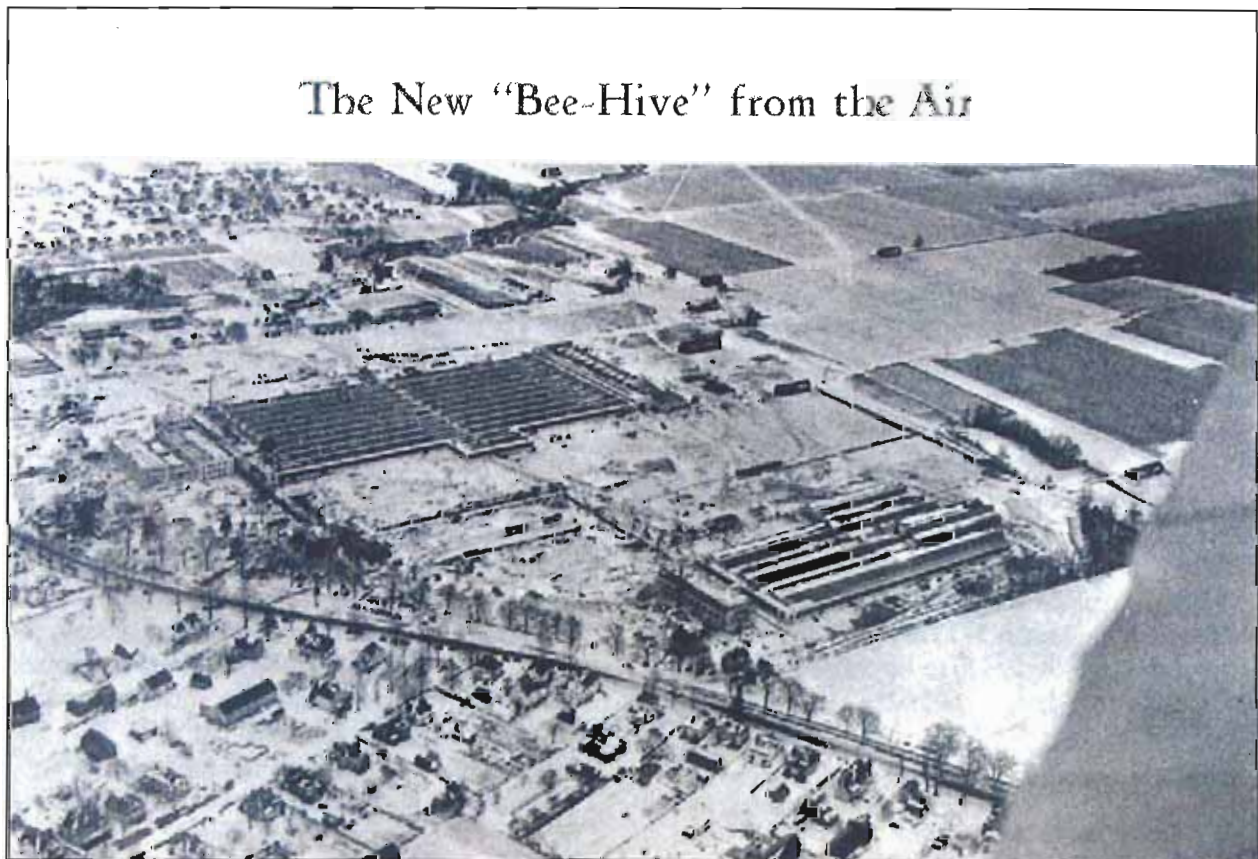


Figure 14. Aerial photograph of the new Rentschler plant and future airfield area in East Hartford, 1930 (collections of the Connecticut State Library).

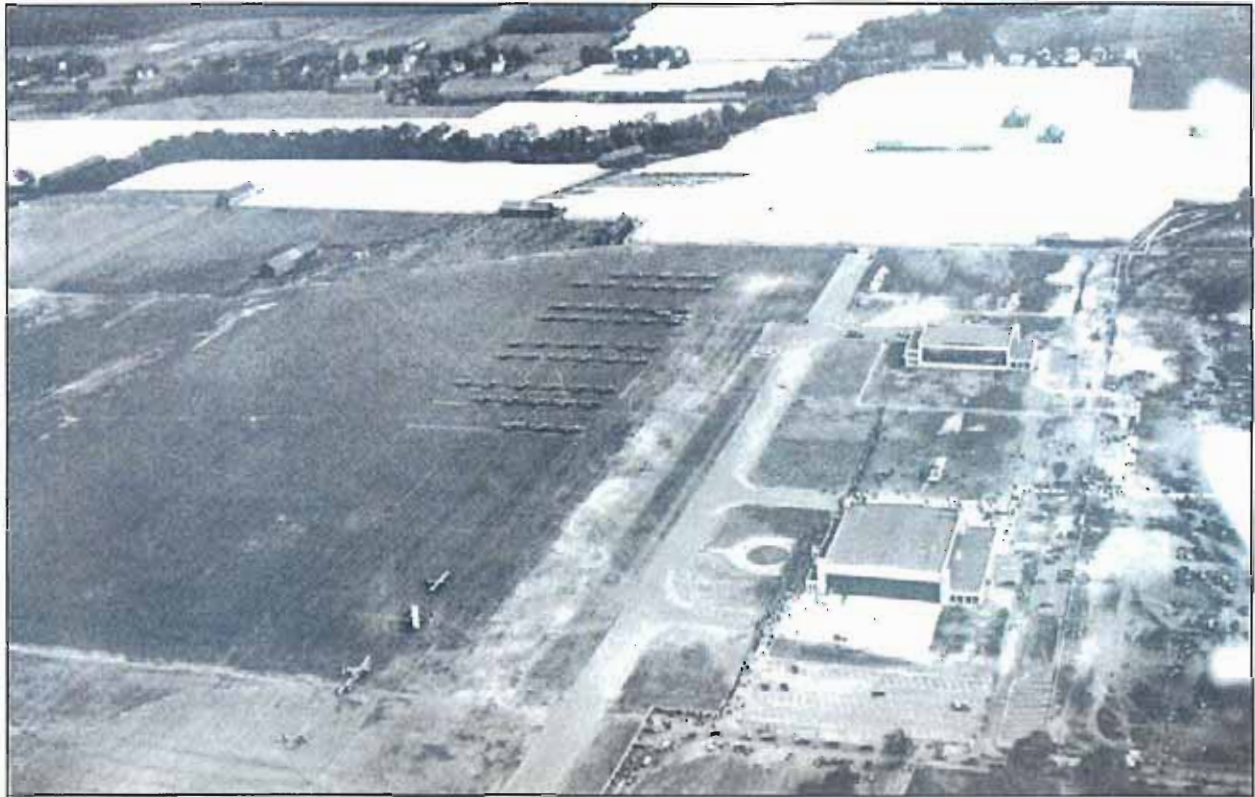


Figure 15. Aerial photograph of Rentschler Field on its official opening day, May, 1931 (collections of the Connecticut State Library).

which combined Pratt & Whitney Aircraft, Boeing Airline & Transport, Chance Vought Corporation, Hamilton Standard Corporation, Sikorsky Aero Engineering, and Standard Steel Propeller under one corporate umbrella (United Technologies Corporation 2006). The meteoric rise of these companies did not occur without controversy. In 1934, the United States Senate convened hearings regarding government subsidies to air mail carriers, during which Frederick Rentschler testified that in 1925 he invested \$293.00 in Pratt & Whitney stock, along with Hartford resident Charles W. Deeds. At the time of its 1929 merger with United Aircraft Corporation, he acknowledged, he received 219,604 shares of that company's stock, which on May 1, 1929, were worth \$35.5 million. He also admitted that over six years his salary and bonuses added up to \$1,585,514.00, which led Senator Black, chairman of the committee, to suggest that the company was profitable enough that it did not need to be subsidized by the Federal government (Wimer 1934). As a result of

these investigations and general disapproval of the affiliation of aircraft manufacturing companies with airlines, United Aircraft and Transport was divided into United Aircraft, Boeing Airplane Company, and United Air Lines Transport. United Aircraft retained Pratt & Whitney Aircraft, Hamilton Standard, and Sikorsky within its structure (United Technologies Corporation 2006).

Still, Rentschler Field endured as an important aviation facility. Between 1932 and 1940, Rentschler Field was also the only airline terminal for the Hartford area. In 1941, the airport's hangars were moved because of the expansion of the factory, and remained in use in those locations until 1999 (United States Army Corps 1999). The new locations, to the north and a little east of the original ones, may be seen in Figure 17, an aerial image taken in 1941. They were still west of the Area of Potential Effect, the southernmost part of which was mostly airfield at this time; the original layout of the runways is visible in this image as well, as is an increase in

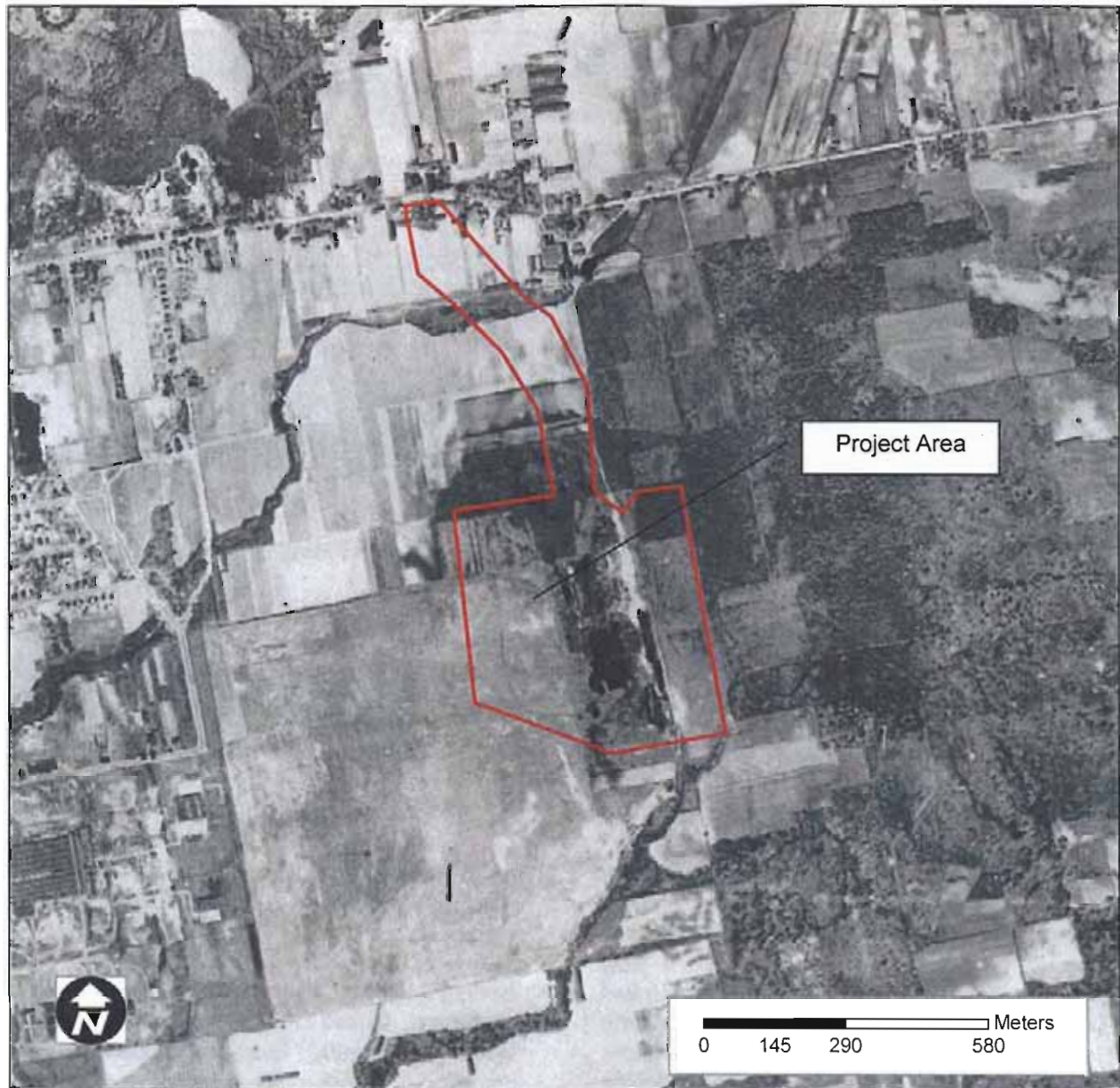


Figure 16. Excerpt from a 1934 aerial photograph with overlay of project area (Fairchild Aerial Survey 1934; Connecticut State Archives).

wooded area and a region of irregular or disturbed terrain toward the south. After the United States became involved in World War II, Rentschler Field became an important military asset as well. The War Department leased an 81 acre portion of land adjacent to the north side of the airfield in 1942. This lease included part of the Area of Potential Effect. A report from August of that year states that the parcel was still used for agriculture, except for an Army Air Force pursuit squadron and an anti-aircraft unit,

whose troops occupied tents set up on the site. A 1942 plan of the area shows the locations of the following structures built on it (Figure 18):

Three Officers Quarters Buildings	Officers Mess
Officers Lavatory	Three Lavatories
Officers Recreation Building	Operations Building
Supply Building	School Building
Enlisted Men's Barracks	Enlisted Men's Mess
Administration Building	Crew Chief Building
Arms Warehouse	Pilot Room
Radio Building	Warehouse
Guardhouse	Link Trainer
Enlisted Men's Recreation Building	

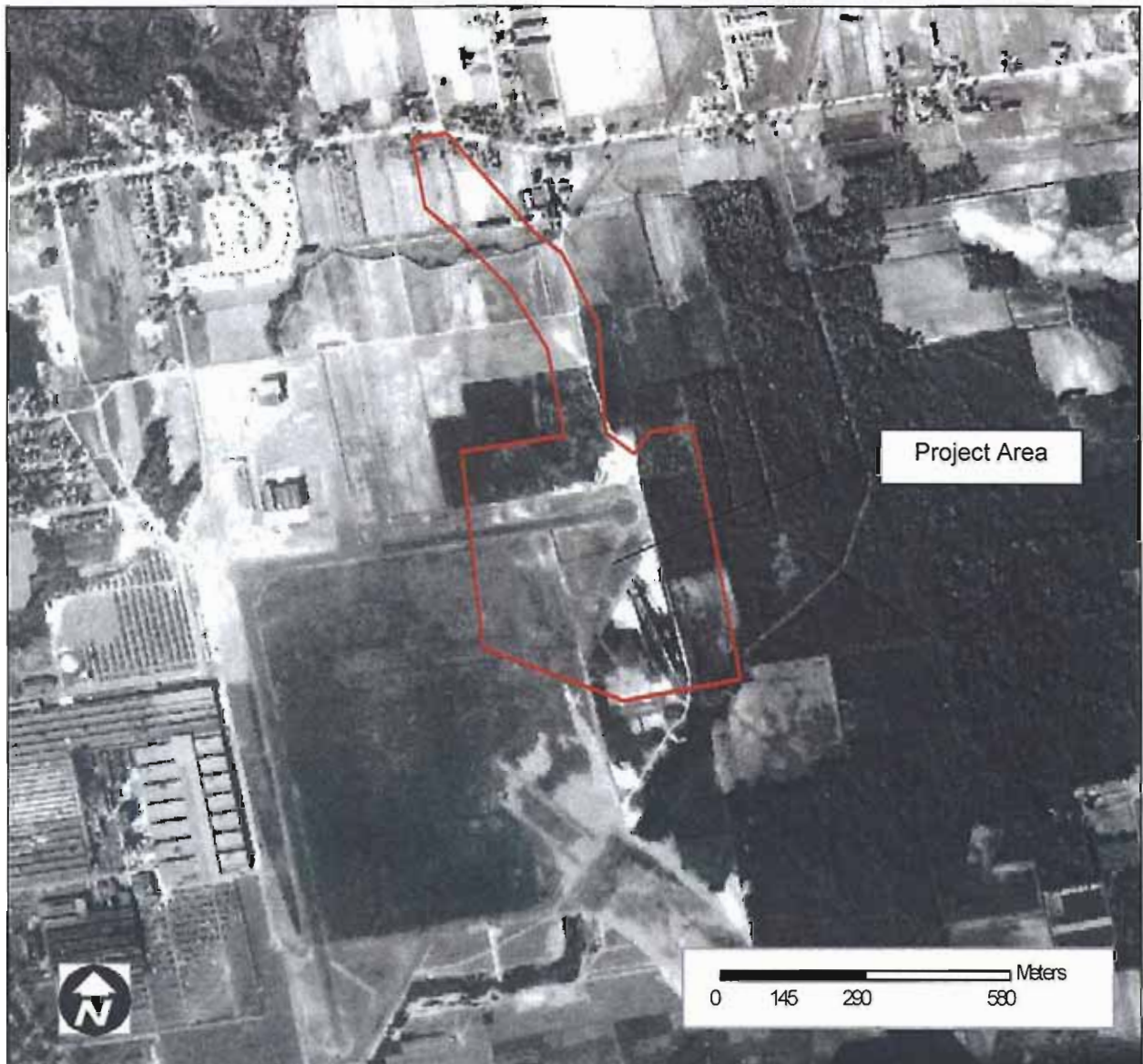


Figure 17. Excerpt from a 1941 aerial photograph with overlay of project area (USDA 1941; collections of National Archives and Records Administration).

This military construction affected most of the area between Willow Brook and the airfield, including part of the Area of Potential Effect. A total of four pre-existing structures, purpose unknown, are also shown, as well as a not-yet-built Ordnance Warehouse. In 1943, however, the First Air Force determined that it did not in fact need any of these facilities and began seeking to cancel the lease. The military's use of the site was discontinued in 1945 and no further Department of Defense use of it was made after that time. A

1999 report also delineated three areas affected by the military activities, shown on a plan of the then-current landscape (Figure 19). The area labeled "1" is the former U.S. Army area, while "2" and "3" (off the Area of Potential Effect) were a small arms range and an explosives storage area (United States Army Corps 1999).

By 1947, and partly as a result of the Second World War, Rentschler Field was the largest in aviation facility Connecticut and New England's largest commercial airfield. Its associated repair

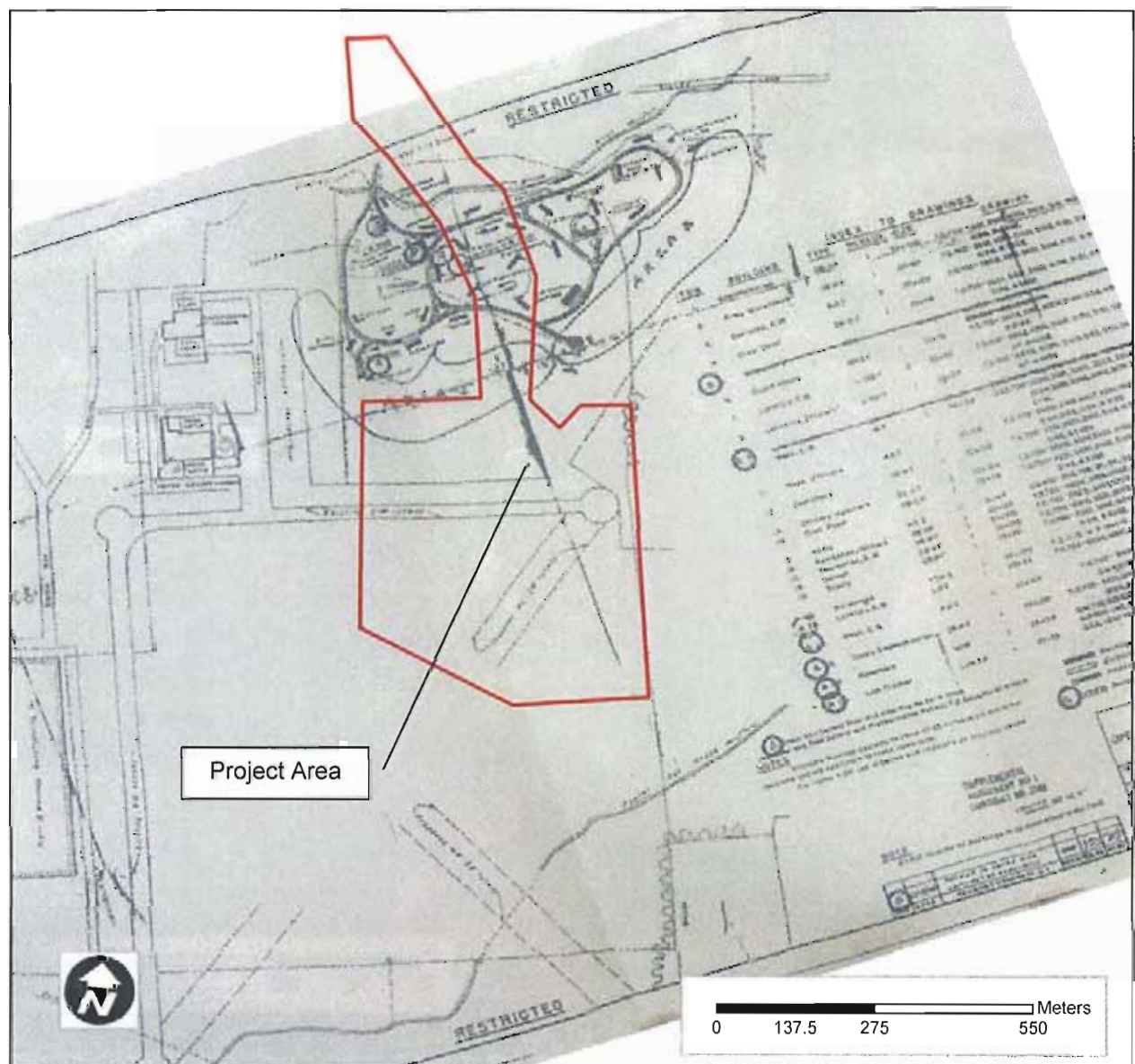


Figure 18. Planned buildings in and near the project area, 1942, with overlay of project area (United States Army Corps of Engineers, 1999; collections of Thomas J. Dodd Center, University of Connecticut).

and overhaul shops handled all kinds of airplane maintenance and repair. The airport also held separate facilities for a wind tunnel laboratory, experimental flight section, an engineering laboratory, and an experimental hangar. The field itself was run by United Aircraft Corporation and had three macadam runways, each measuring 150 feet in width. These runways replaced, replacing turf airstrip opened in 1931. According to Delear (1947:7) the restructured and expanded airfield consisted of “[a] lush, green expanse of former

tobacco land, now graded to billiard table smoothness.” The Town of East Hartford Assessor’s aerial photograph dating from 1948 depicts the runways and their relationship to the Area of Potential Effect (Figure 20). Almost all of the southern part of the Area of Potential Effect had been graded and smoothed by that time. On the northern part, the military buildings had already been demolished, the only trace of them being the remains of one or two of the roads built to access them; in the process, the traces of the

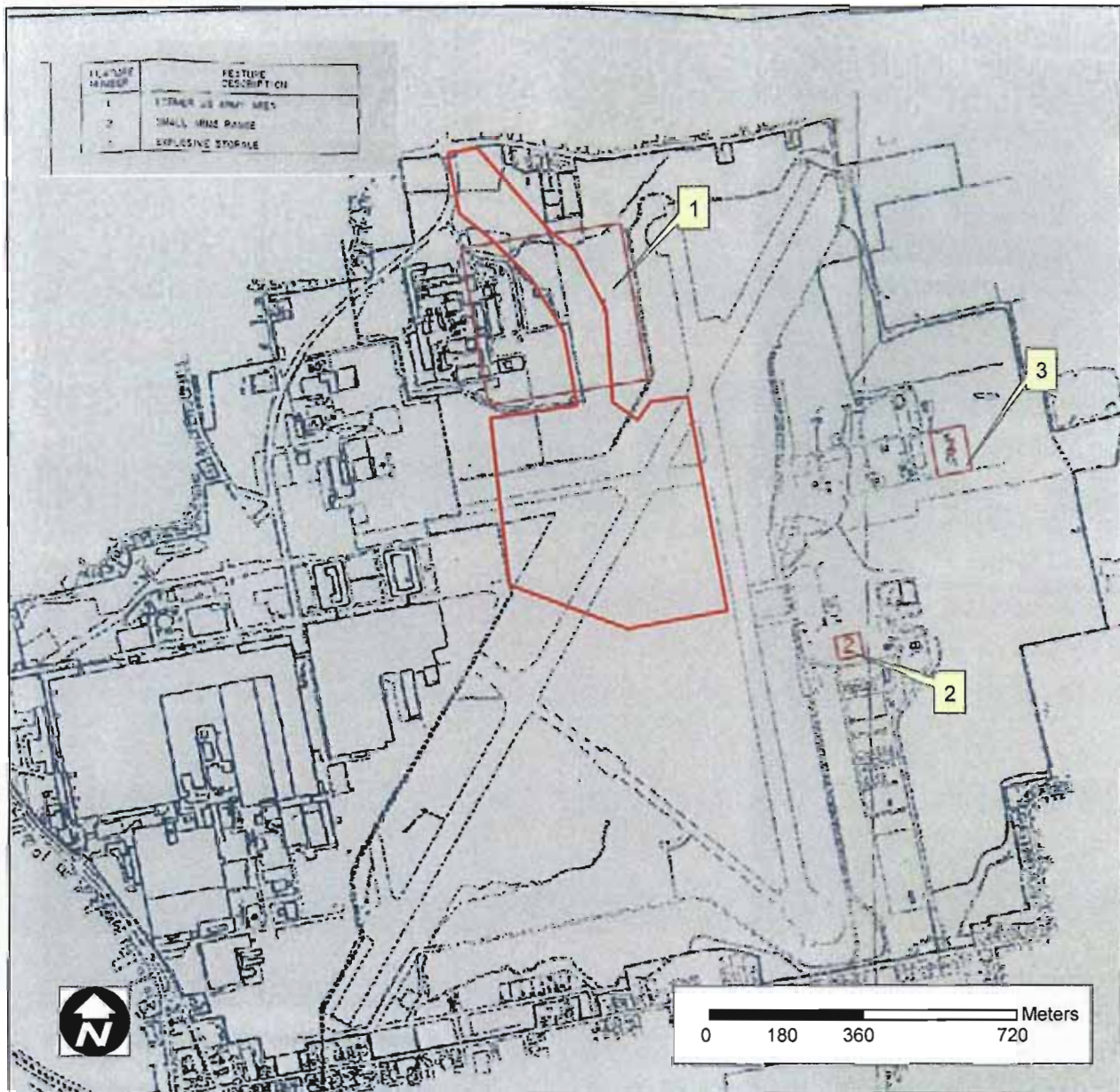


Figure 19. Reconstruction of World War II era military construction zones at Rentschler Field, with overlay of project area (United States Army Corps of Engineers, 1999; collections of Thomas J. Dodd Center, University of Connecticut).

old agricultural fields in this area also were obliterated. The runway area also had been extended to an area northwest of where it had been, and a new building had appeared west of the Area of Potential Effect. The USGS topographic map series compiled between 1944 and 1950 shows, via the topographic lines, how extremely flat the Rentschler Field area was, although the field's location is at the intersection of four of the quadrangles, (some of which were

compiled in different years), making further conclusions about the landscape difficult (Figure 21).

During World War II, Pratt & Whitney Aircraft answered the United States military's call for aircraft engines with a series of Wasp engines, including the R-2800 Double Wasp and the R-4360 Wasp Major. Overall, nearly one half of the engine power employed by America's aerial forces during the war was supplied by Pratt

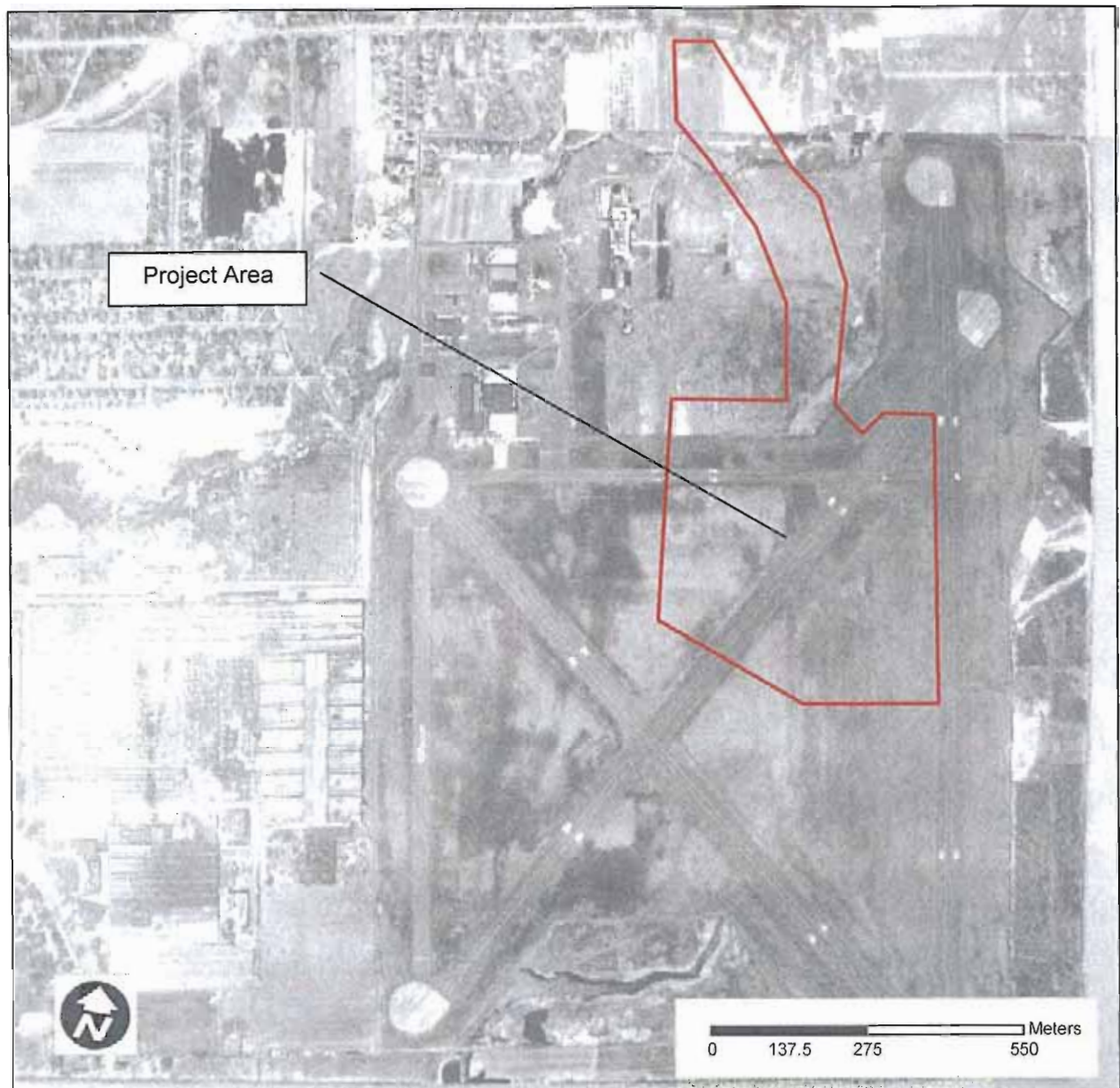


Figure 20. Excerpt from a 1948 aerial photograph with overlay of project area (East Hartford Engineering Department 1948).

& Whitney. In addition to the East Hartford facilities, another factory was built in Kansas City to supply the military's demand. At the end of the war, however, a new factor had appeared, namely, other companies had developed the gas turbine jet engine, while Pratt & Whitney labored to meet the demand for piston engines. Frederick Rentschler and his company responded by establishing the Wilgoos Turbine-Engine Test Facility, named after one of the founding

engineers of the company. Completed in 1950, the J-57 jet engine won its designer, Luke Hobbs, the Collier Trophy for aviation achievement in 1952.

Amid all of these technological developments, Rentschler Field remained a hub of activity and an important test flight facility that continued to be expanded and upgraded. A 1952 aerial photograph of the airfield and its surroundings shows the paved runways and

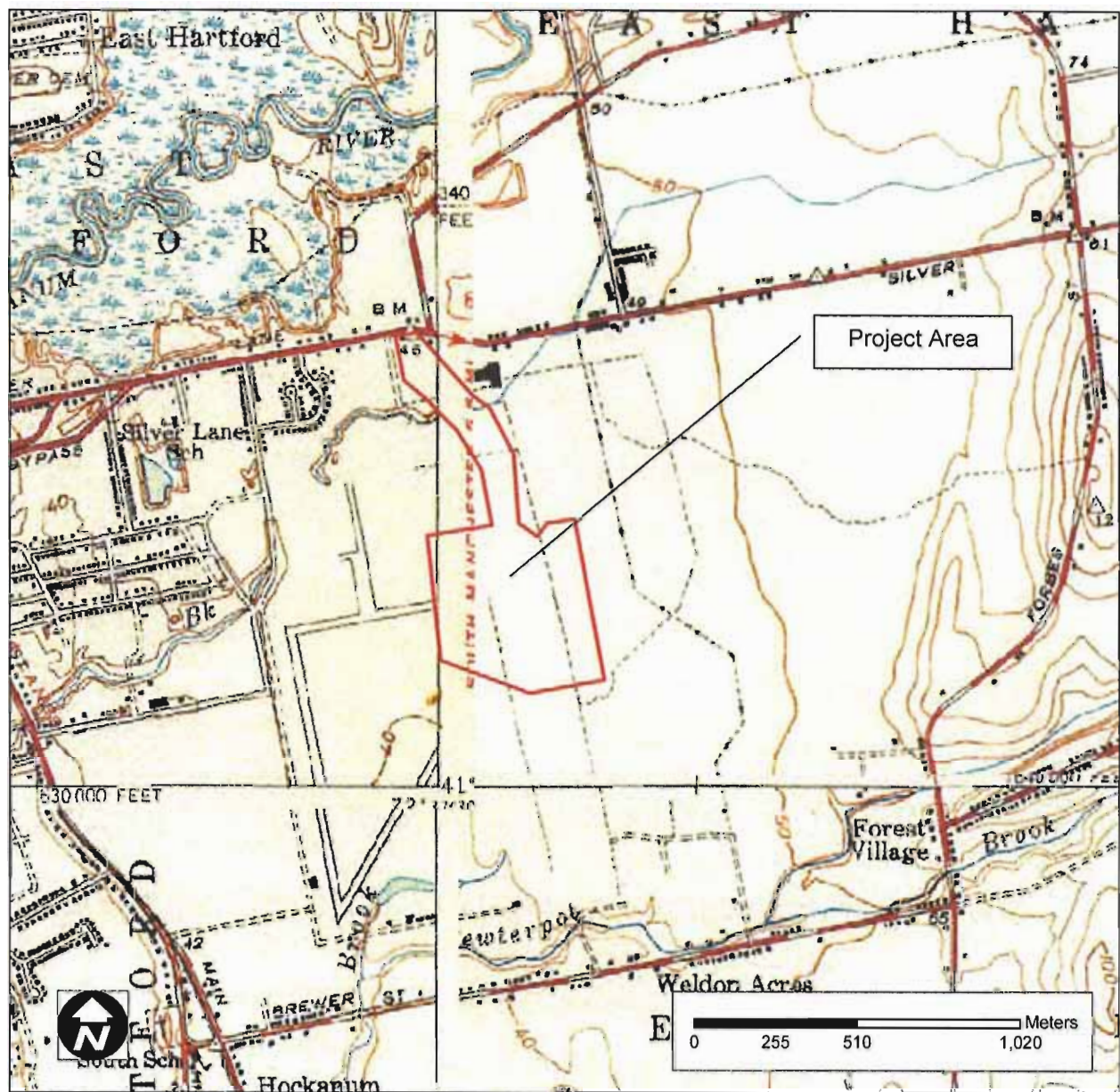


Figure 21. Excerpt from the USGS 7.5' series Glastonbury, Manchester, Hartford South, and Hartford North quadrangles topographic, 1944 to 1950 (collections of University of New Hampshire).

taxiways, much as they were in 1948. These runways and taxiways were extended through and adjacent to the Area of Potential Effect from southwest to northeast, from east to west, and from north to south along the eastern edge of the proposed project (Figure 22). This undoubtedly required considerable cutting, filling, and grading to achieve the level nature of this area. Also, there appears to have been a surviving tobacco shed to the north of Willow Brook, as well houses located on Silver Lane. No significant new buildings had

appeared since 1948, and the area to the east of the Area of Potential Effect was still mostly forested. Subsequent aerial photographs document a series of changes to Rentschler Field and the proposed project area, some more substantial than others. In 1957, for example, the area between the airfield's runways and Willow Brook WAS cleared and re-graded. There also appears to have been construction in progress in the woods to the east. Otherwise, little had changed between 1952 and 1957 (Figure 23).

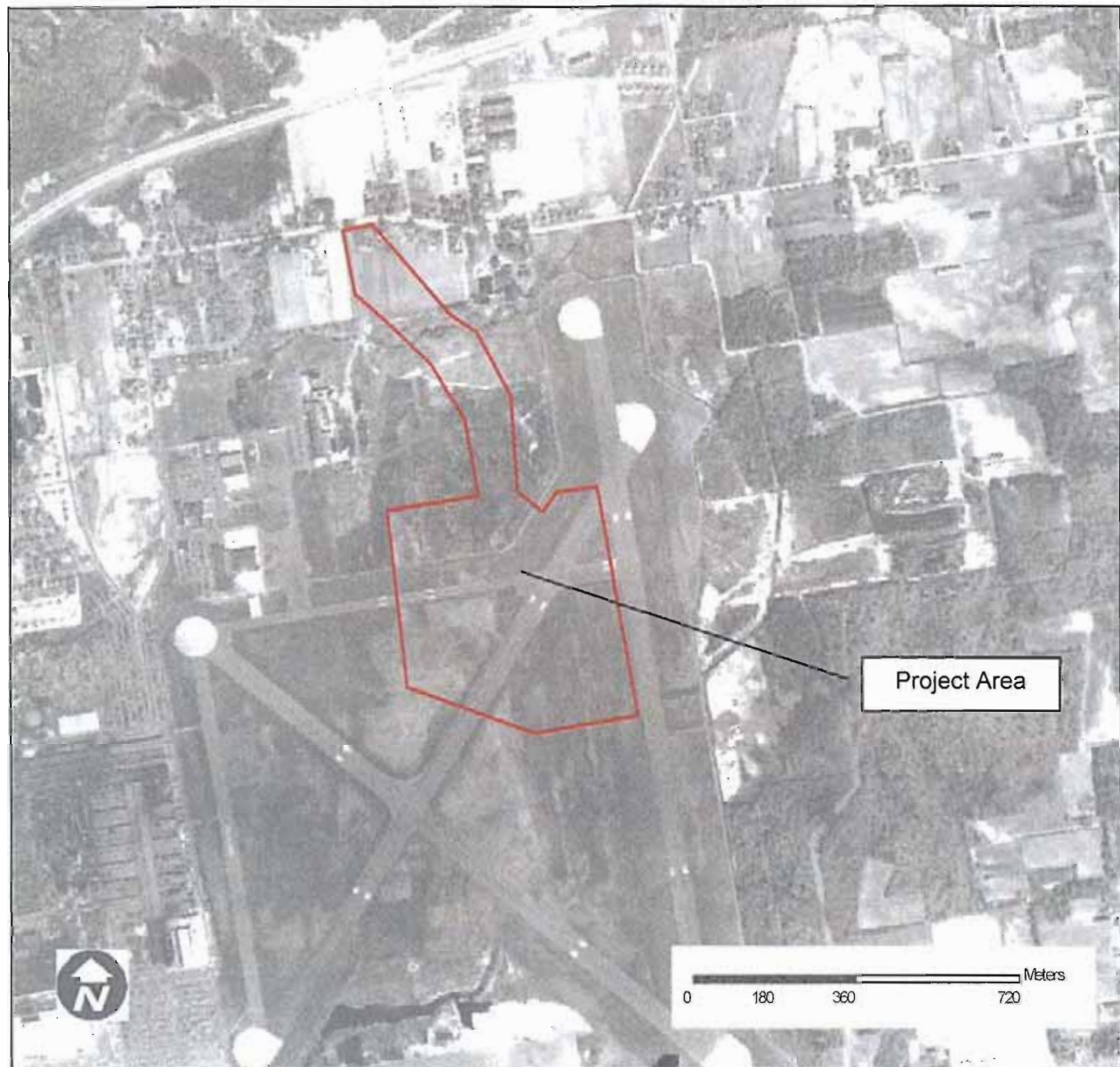


Figure 22. Excerpt from a 1952 aerial photograph with overlay of project area (collection of Homer Babbidge Library).

By 1962, the United Aircraft Corporation had five divisions in the state. Those in East Hartford included Pratt & Whitney Aircraft (with additional plants in North Haven and Southington), the Missiles & Space Systems division (established in 1958), and a Research Group (Bingham 1962). During the 1960s, Pratt & Whitney's East Hartford division developed the JT8D jet engine, "the most popular commercial jet engine in history," among others

(United Technologies Corporation 2006). According to the aerial image taken in 1968, the northwest corner of the runway system of Rentschler Field had been abandoned in favor of another building complex located slightly to the southwest of the Area of Potential Effect, as well as a large paved area that extended into the southern part of the Area of Potential Effect (Figure 24). In addition, the east-west runway that first appeared in the 1941 aerial photograph



Figure 23. Excerpt from a 1957 aerial photograph with overlay of project area (collection of Homer Babbidge Library).

appears to have been converted into a taxiway by that time, while the other two runways appear to have remained in use in 1968. As of 1968, there were two small buildings situated between the runways and Willow Brook, but no other clearly identifiable features. In addition, numerous small buildings had appeared to the east by 1968, pushing back the edge of the forested area that was still present at that time. In 1975, United

Aircraft Corporation changed its name to United Technologies Corporation (UTC 2006). The changes in the runways and building footprints in the Rentschler Field are depicted in a series of three figures compiled for this report. The first, Figure 25, shows the pattern of the runways crossing the Area of Potential Effect as of 1960. The second, Figure 26, depicts the runways and standing structures as of 1976, showing relatively

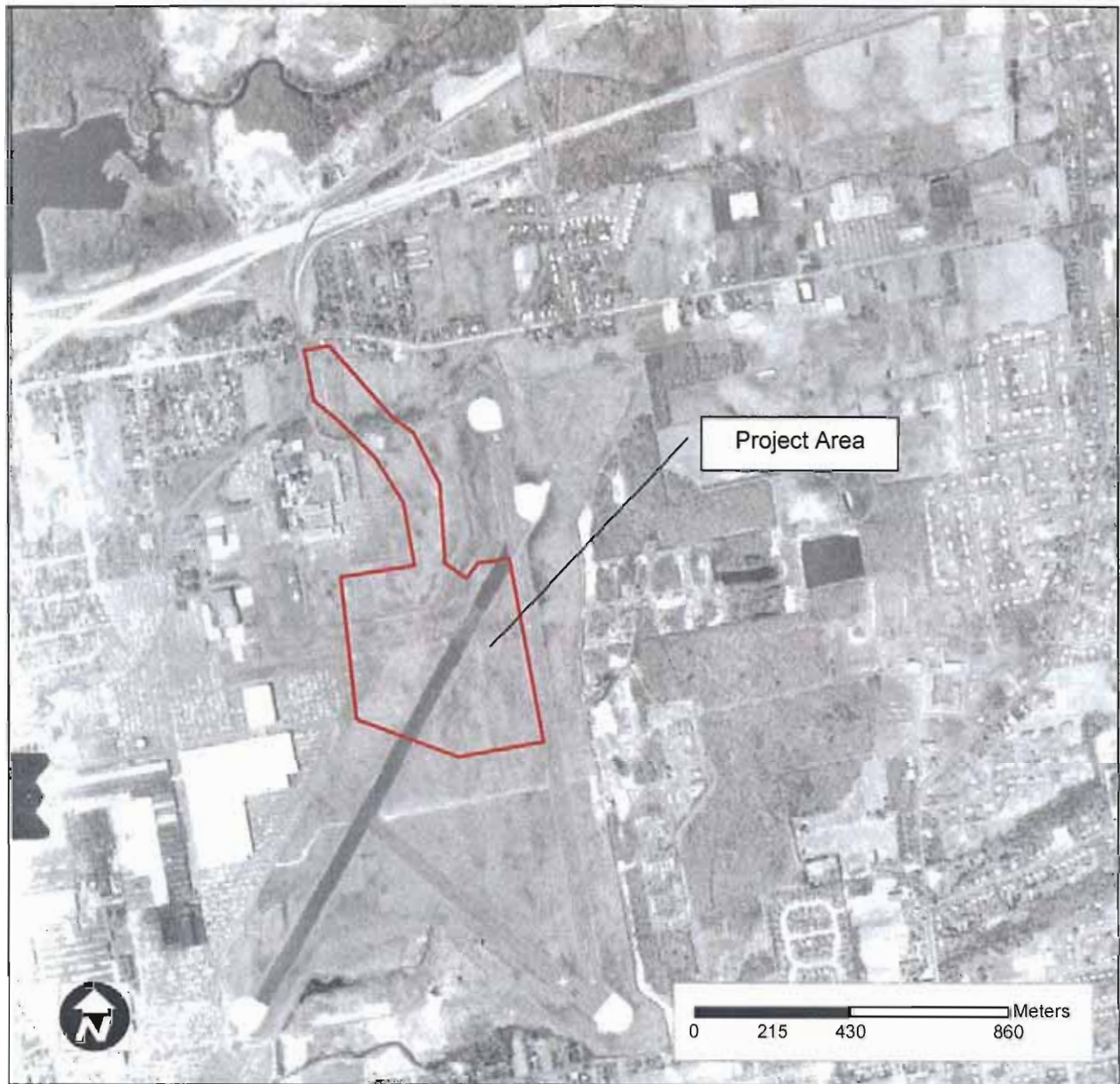


Figure 24. Excerpt from a 1968 aerial photograph with overlay of project area (collection of Homer Babbidge Library).

little change since 1960. The greatest amount of change is in the third figure, Figure 27, in which most of the runways are shorter and the cluster of small buildings east of the Area of Potential Effect has vanished.

The Pratt & Whitney phase of ownership of the Rentschler Field was important and most likely had the greatest physical impact on the Area of Potential Effect due to the grading and leveling of the airfield and the construction and

demolition of the Army facilities; however, the area's history prior to Pratt & Whitney's ownership of it also is important to the current investigation. The most effective way to examine this history is to conduct a title search of the property. Not only does such a title search identify the past owners of the property, which can provide leads for further research, but the deeds themselves often contain information about the uses of the property and any structures that

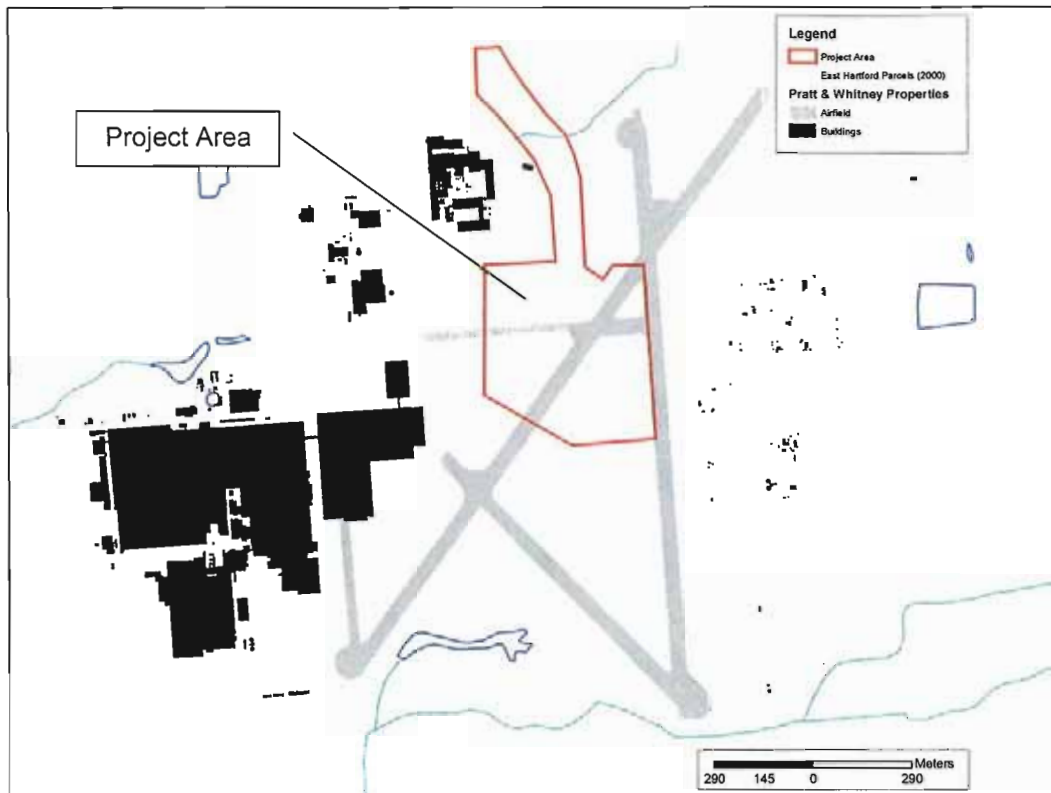


Figure 25. Reconstruction of Rentschler Field runways and building outlines derived from Metropolitan District Commission Topographic Map Series, 1955-1964, with overlay of project area (collection of Connecticut State Library).

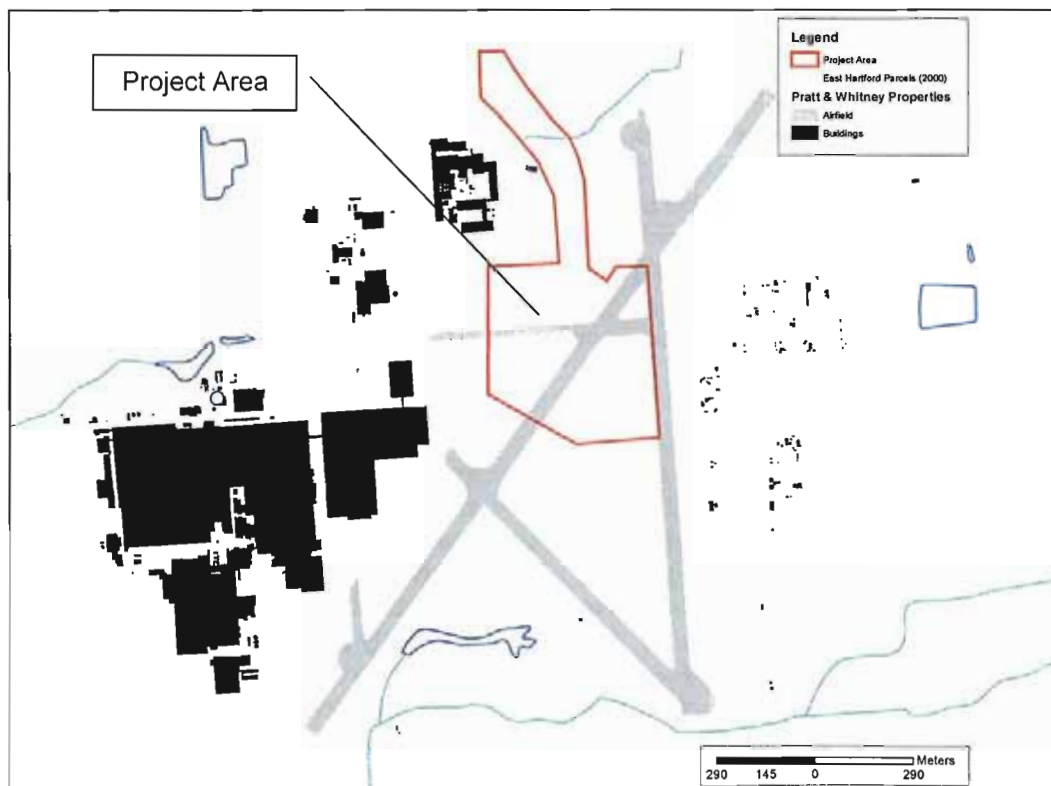


Figure 26. Reconstruction of Rentschler Field runways and building outlines derives from Metropolitan District Commission Topographic Map Series, 1975-1976, with overlay of project area (collection of Connecticut State Library).

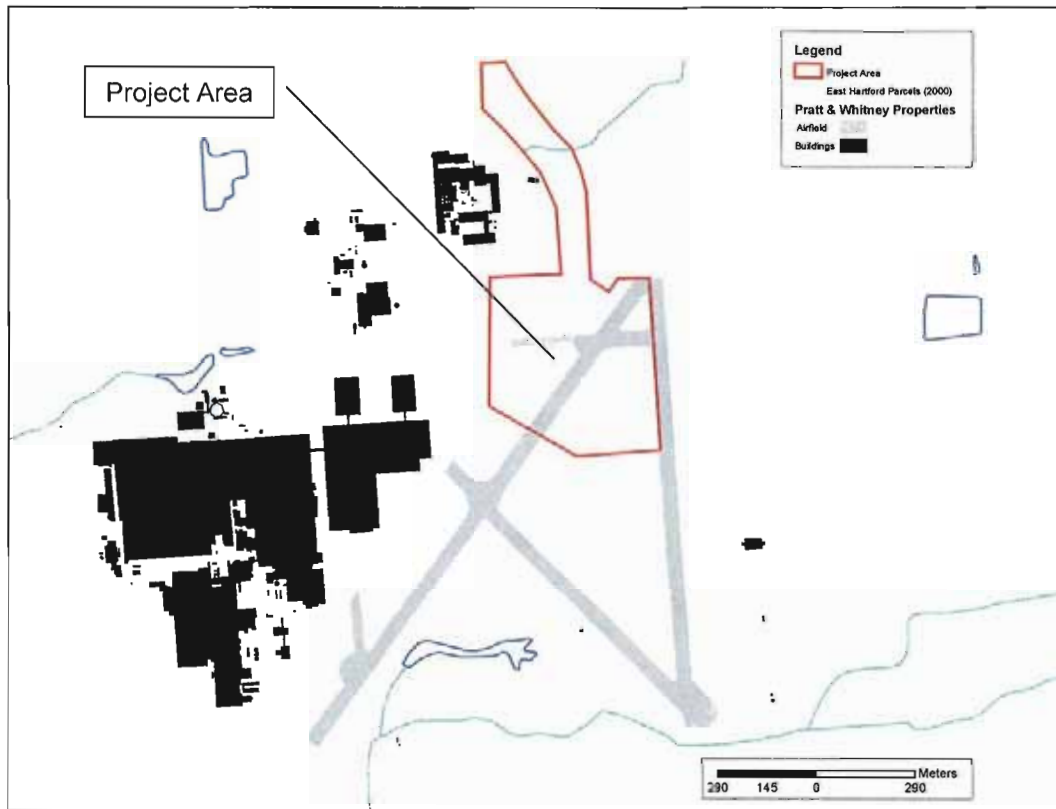


Figure 27. Reconstruction of Rentschler Field runways and building outlines derived from Metropolitan District Commission Topographic Map Series, 1975-1976, with overlay of project area (collection of Connecticut State Library) and 2004 aerial photograph (Connecticut Department of Transportation 2004).

may have been located thereon. Deeds, for example, often mention houses or other structures, include descriptions with landmarks, or identify the land's use, such as if it is woodland or pasture. This information expands the understanding of human impacts on the landscape and, as a consequence, its archeological sensitivity.

Landowners Prior to 1929

Of the numerous parcels of land purchased by Pratt & Whitney in 1929, a total of 11 included parts of the Area of Potential Effect. These are depicted in the map shown in Figure 28. This figure is based on a map of unknown authorship that is held in the Town of East Hartford's Engineering Department; it has been assigned the date of 1929 because it shows the land parcels acquired by Pratt & Whitney in that year. It should be noted that the two northernmost parcels depicted in the map, which were not

tested for cultural deposits because they fell outside the proposed project area, were omitted from this phase of the ownership history research; they are not related to the current investigation. In addition, the parcels designated "I" and "K" during the research process were omitted from this discussion because later examination of the records indicated that they were not significantly connected to the Area of Potential Effect.

While completing the ownership research, it was determined that the land records examined confirmed Paquette's (1976) statement, mentioned above, that the majority of the land purchased by Pratt & Whitney consisted of tobacco fields. The deeds reviewed refer repeatedly to growing seasons and to the presence of tobacco sheds on many of the parcels. These appear, however, to have been the only structures previously located in the Area of Potential Effect and its vicinity. Additional confirmation of the importance of tobacco in this area comes a

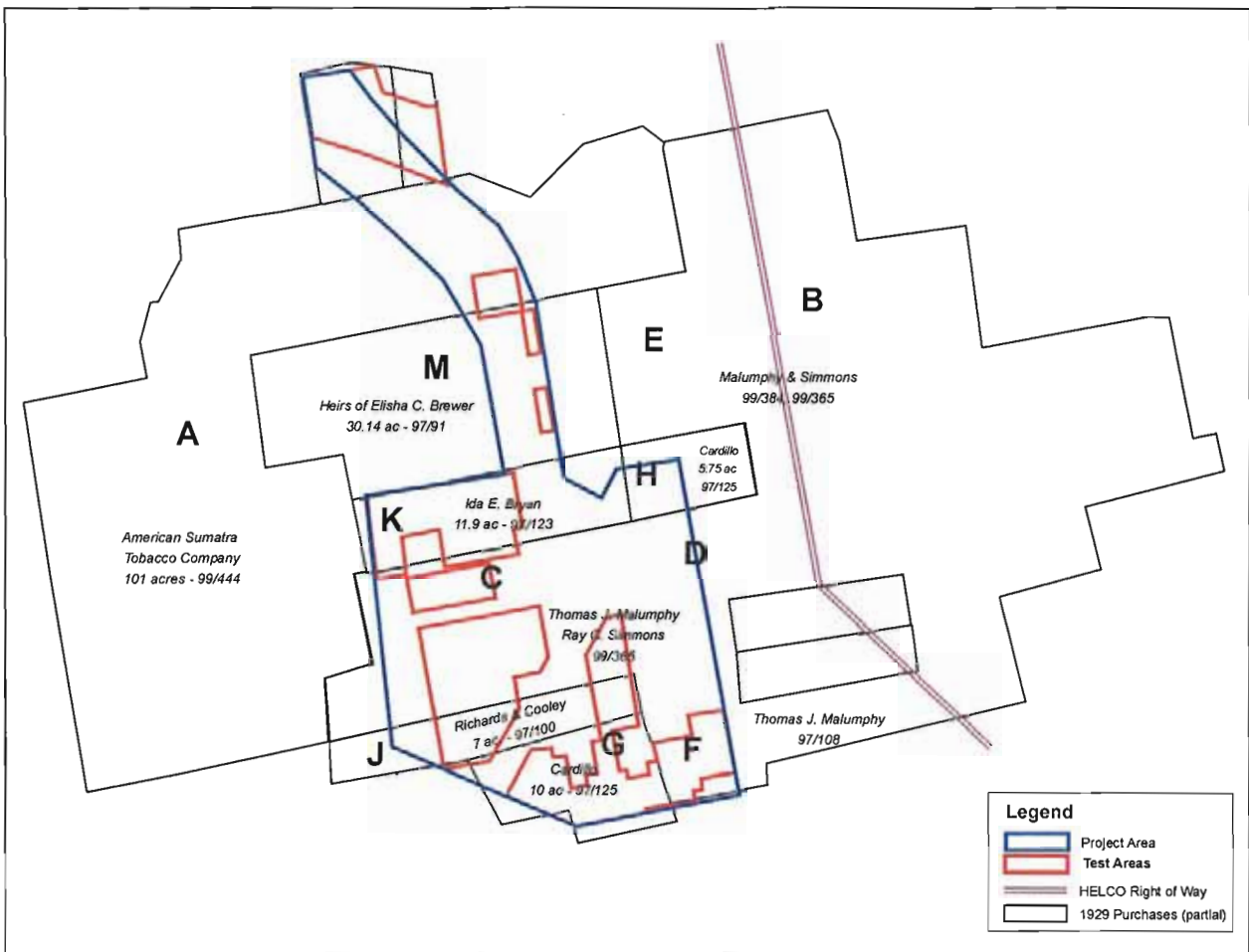


Figure 28. Reconstruction of project area 1929 land parcels derived from manuscript plan on file with the Town of East Hartford Engineering Department.

number of the deeds, as seen below, that refer to the presence of drainage ditches along the boundaries of lots. Throughout the discussion below, reference is made to the identifying alphanumeric codes for the parcels. These codes, which do not correspond to the letters assigned to the Development Area discussed in Chapters I, IV, VII, and VIII, were assigned solely for the purpose of organizing the documentary ownership information. They are also presented in the title chain included as Appendix I. This latter document presents the sequence of ownership of the various parcels of land, proceeding backwards from owner to owner.

These short histories of land ownership, including available details about the owners themselves, present this parcel in a meaningful

place in the social and historical context of the town, state, and country. Most of these landowners were local residents, not absentee owners. Although a few of the owners were wealthy, the different socioeconomic groups did not live very far from one another. Landowners are not, however, a representative sample of the population. In this time period, the ability to purchase a piece of land, even mortgaged, indicates either pre-existing wealth or a significant level of industry. Employees of the nearby pickle factory, like Thomas J. Malumphy, and immigrants such the Cardillo and Geiselman families, were engaged in climbing the ladder of economic success, and ownership of this land was part of the process. Other owners, such as the Pratt, Gould, and Brewer families, were life-long

residents of the United States and they seem to have had more local connections than actual wealth. All of them were neighbors, living in a web of relationships formed by the land and the use of it, as well as whatever other employment or sources of income they may have had.

American Sumatra Tobacco Corporation-Parcel A

The large parcel designed “A” in Figure 28 was sold to Pratt & Whitney by the American Sumatra Tobacco Corporation (East Hartford Land Records, Vol. 86, Page 1). The deed to the American Sumatra Tobacco Corporation described the parcel as containing 101 acres of land, and it provided a description consisting only of the abutting owners’ names. It also stated that the American Sumatra Tobacco Corporation owned all of the land lying east of Willow Street and south of Silver Lane, including a right-of-way over the southerly part to “P.S. Brewer.” The deed reserved right to keep possession of the property until the tobacco crop in the field was harvested. American Sumatra Tobacco Corporation received the property in a transfer from the America Sumatra Tobacco Company in 1926 (East Hartford Land Records, Vol. 86, Page 1). According to the deed, this sale was a result of unspecified proceedings in the United State District Court, probably relating to bankruptcy or other financial problems of the former, as it also mentions two receivers for the America Sumatra Tobacco Company who had been appointed by the court. The deed actually transferred property in 11 towns in the Connecticut Valley, and it

referred to the property containing the proposed project area as “The Silver Lane Plantation.” This “plantation” totaled 132.668 acres in three pieces, one of which was situated on the west side of Willow Street and is not further discussed here. Of the remaining two, one contained 102.155 acres and the other 20 acres, each described only by the abutters’ names. The 20 acre lot (A(ii)) was located near the northeastern corner of parcel A, and it was abutted by land of or formerly of “F.C. Gould” and had been owned by F.C. Gould. Gould was the owner of the Silver Lane Pickle Factory, once located just north of that northeast corner. It is not presently known how the parcel size was reduced from 122.155 acres to 101. In a 1931 map of the vicinity, F.C. Gould is still listed as an adjacent property owner (Figure 29).

The America Sumatra Tobacco Company had purchased this land in 1918 from The Connecticut Tobacco Corporation, which according to the deed had voted to dissolve and sell its land (East Hartford Land Records, Vol. 58, Page 364). In this transaction, the America Sumatra Tobacco Company bought the three parcels described above, designated “The Silver Lane Plantation,” along with two other plantations. The Connecticut Tobacco Corporation was formed in 1901, and its first president was William J. Hazelwood of New York. Its dissolution was due to its merger with America Sumatra Tobacco Company (*Hartford Courant* 1901, 1917). The Connecticut Tobacco Corporation had purchased this subject land in nine pieces in 1911 and 1912. These purchases are listed in the following table (Table 10).

Table 10. Project area property parcels purchased by the Connecticut Tobacco Corporation between 1911 and 1912.

REFERENCE	YEAR	VOLUME/PAGE	ACREAGE	SELLER
A(i)(a)	1911	47/720	5.733	Hills, Samuel A.
A(i)(b)	1911	47/721	7.133	Forbes, Albert A. and William G.
A(i)(c)	1911	47/722	39.036	Gould, Frank C.
A(i)(d)	1911	47/723	7.177, 0.342	Geiselman, Simon
A(i)(e)	1911	47/724	15.387	Geiselman, John Jr.
A(i)(f)	1911	47/725	7.506	Geiselman, John Sr.
A(i)(g)	1911	47/726	3.39	Sexton, Henry A.
A(i)(h)	1912	51/400	16.451	Treat, Edwin A.
A(ii)	1911	47/727	20.0	Gould, Frank C.

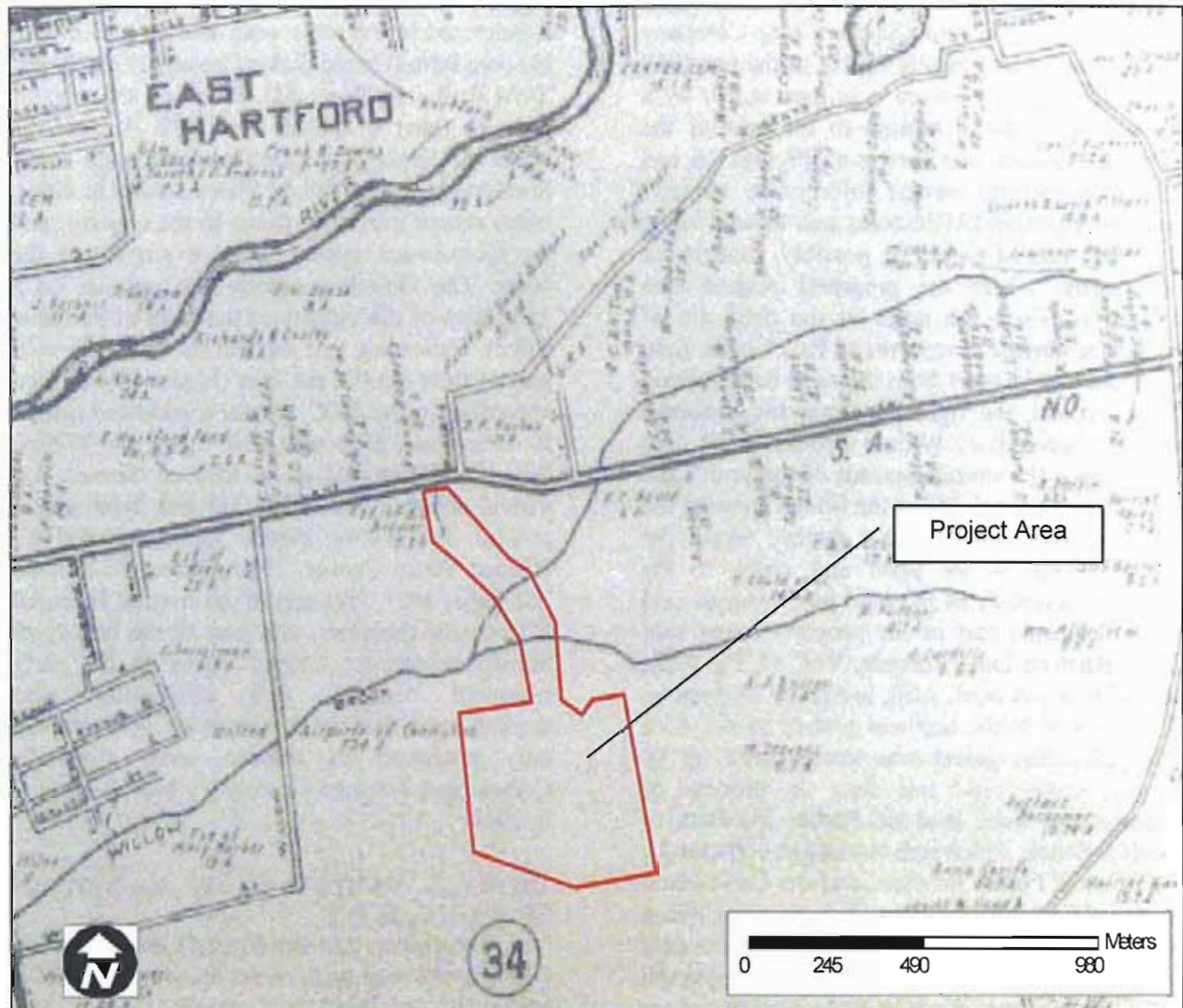


Figure 29. Excerpt from an historic 1931 map of Hartford County depicting the proposed project area (collection of Connecticut Historical Society).

All of these deeds except A(i)(g) refer to and convey tobacco sheds, together with tier poles and lath in the sheds. This confirms that they were, as might be expected, shade tobacco fields. Each deed also includes a detailed metes-and-bounds description of the parcel, but unfortunately these make use of an unusual form of survey notation that cannot easily be mapped. They also tend to refer to stone monuments marking angles and corners, although by the present day these are probably lost. American Sumatra and the Connecticut Tobacco Company were part of the tobacco-growing history of East Hartford and Connecticut, as discussed above.

Their effect on the landscape included plowing of the land; the construction of footings for drying sheds; the installation of multiple rows of shade tent poles; and the application of pesticides and fertilizers.

The deeds from Frank C. Gould provide the most interesting additional details. The first, A(i)(c), states that the description's starting point is a stone monument located 300 feet to the west of "the rear of F.C. Gould's factory," meaning the Silver Lane Pickle Factory shown in a Sanborn fire insurance map as located on the south side of Silver Lane across from the intersection with Gold Street, and which appears in the life

histories of some of the other landowners discussed in this section (Sanborn Map Company 1927). The factory also is visible in the pre-1968 aerial photographs, where it is represented by a cluster of buildings located to the east of the proposed project area (see, e.g., Figures 16 and 17). The abutting owners information strongly suggests that this 39.036 acres was located along the north end of parcel A, possibly, though not necessarily, where the proposed project area crosses it. Thus, the notes in the deed are of particular interest. It reserves to F.C. Gould, first, the right to take sand from the sand bank located there; second, the right “to drain his sewerage into the brook [i.e., Willow Brook] as he now does during the various seasons of the year”; and third, a right of way “from the bridge crossing the brook to the South of his factory along the easterly edge of the pond and brook to the southern boundary of the land belonging to said Gould” located east of the property being sold (East Hartford Land Records, Vol. 47, Pg. 722). Gould’s second deed, A(ii), is equally interesting. Also located in the northern part of parcel A, it states that the parcel was encumbered by “a certain sewer pipe line now in process of construction from land of Forbes Brothers to Willow Brook, which is to be used in common by F.C. Gould, Forbes Brothers, and the Connecticut Tobacco Corporation.” The deeds also specifies a across this area that suggests that this parcel may have been north of Silver Lane rather than south of it. From these deeds it is known that even before Pratt & Whitney’s construction phases, portions of the Area of Potential Effect were impacted by the installation of a sewer line and the excavation of sand.

The general social and historical context of the land is further developed by research into one of the nine people that the Connecticut Tobacco Company bought its land from. According to the United States Census of 1910, there was a Simon E. Geiselman living in the Silver Lane section of East Hartford; he was identified as a 47-year-old that was born in Germany. He immigrated to the United States in 1866, married a Connecticut-born woman named Cora H., and owned operated his own farm, which probably included parcel A(i)(d). On the same page is listed a John A. Geiselman, aged 71, who also was born in Germany and immigrated in 1866. His wife

Agatha had also been born in Germany and immigrated in the same year, and he also owned his own farm (United States Census, 1910, Series: T624 Roll: 131 Page: 82). Based on the ages of the two men, it appears that John A. was the father of Simon E. Geiselman. Although many immigrants to the United States settled in cities, many others moved to farms in the country, and the Geiselmans appear to be examples of the latter. The Geiselman name also appears on a 1931 map of the vicinity of the Area of Potential Effect, indicating that the family had only sold part of their land in the area (Figure 29). In fact, according to the 1930 census, a widowed Simon E. Geiselman (66) was still living on Willow Street and working as a tobacco farmer. He owned a house worth \$15,000 and lived with a servant, the widow Fannie Harrison, aged 67 (United States Census, 1930, Series: T626 Roll: 262 Page: 145). This part of the Area of Potential Effect was, therefore, also part of the history of immigrants to the United States in the early twentieth century. This information also demonstrates that large companies were not the only producers of tobacco, even after the Connecticut Tobacco Company’s buy-up of land in 1911.

Thomas J. Malumphy & Ray C. Simmons- Parcels B, C, D, & E

The parcels labeled B, C, D, and E on the 1929 parcels map were once owned by Thomas J. Malumphy & Ray C. Simmons (Figure 28). When Malumphy and Simmons sold Parcel B to Pratt & Whitney the transfer deed did not provide an acreage, though it mentioned “buildings” on the parcel. The description indicates also that it abutted by Parcel A and Parcel H, but it is not clear whether it impinged on the Area of Potential Effect. The grantors reserved rights to the existing tobacco crop, and noted that rights-of-way to Hartford Electric Light Company existed on the property map (depicted in the parcel map), as well as an abutting owner named Salvatore Capodicasa (East Hartford Land Records, Vol. 99, Pg. 384). Parcels C, D, and E were sold in one deed, none with a listed acreage. They included buildings and “poles and laths in the sheds” (East Hartford Land Records, Vol. 99 Pg. 365). Thus, at least some of this area was used for tobacco production as late as 1929, as well as supplied with

drying sheds and associated equipment. It is not presently known how Ray C. Simmons acquired part interest in parcels B, C, D, and E, because the land records indicate that Malumphy alone bought 74.4 acres of “brush and stump land” from the estate of Horace B. Williams in 1924 for \$7,410. The deed, like the later ones to Pratt & Whitney, includes some distances and directions, but none specific enough for them to be mapped accurately. The deed does, however, mention the existence of ditches along its boundaries with the “Sexton Lot” (property of Salvatore & Lucia Capadocio and Vincenzo Rizzo), the heirs of Ezra Williams, Edward Risley, the America Sumatra Tobacco Company (Parcel A), and Estate of D. L. Bryan (Parcel K) (East Hartford Land Records, Vol. 72, Page 201). The existence of ditches indicates that the area needed to be drained before it could be used for agriculture. The excavation of these ditches would have created considerable disturbances to the landscape. The fact that the 74.4 acre parcel was described as brush and stump land suggests that it was Malumphy who first put it use for growing tobacco, although it is also possible that it had simply been uncultivated for a number of years. Thomas Malumphy is discussed in more detail in the following section.

Parcels B, C, D, and E have been further traced to a partition of lands between Horace B. Williams and George A. Williams in 1914. According to the deed, C. Henry Olmsted was conservator for Horace B. Williams, and he brought suit against George A. Williams regarding the land (East Hartford Land Records, Vol. 54, Pg. 281). The deed describes 76 acres of “wood and stump land” in a manner similar to the description in the deed to Malumphy (East Hartford Land Records, Vol. 54, Pg. 281). Horace and George Williams purchased relatively few parcels of land, according to the land records, and it seems likely that they inherited most of it from their father, Horace Williams. Other documents in the land records suggest that the family homestead was located on the Hockanum River; the 1855 map of East Hartford shows two houses marked “H. Williams” to the west of Main Street and the Area of Potential Effect (Figure 30). An “H. Williams” also appears in the same location on the 1869 map of the area (Figure 31). Goodwin further reports that the Second South District school was located on the western side of

Main Street “near the present residence of George A. Williams” (1879:168). It is very likely, however, that both they and the first Horace Williams did own the more eastwardly located lot containing the Area of Potential Effect, as discussed in more detail below.

According to the 1910 census, Horace B. Williams Sr. (aged 55) lived on South Main Street in the Silver Lane district of East Hartford with his wife Ada E. (aged 53) and daughter Arline S. (aged 17?). They shared their residence with an Irish-born laborer named Michael Keating and a Polish-speaking German-born servant named Catherine Bolonski. Horace B. Sr. gave his profession as “market gardener,” which refers to the practice of growing fruits and vegetables for a nearby urban market (United States Census 1910, Series: T624 Roll: 131 Page: 82). The cemetery records for Center Cemetery in East Hartford compiled by Spaulding include Horace Bridgman Williams (1855-1923) and his wife Minnie Louise Beaumont Williams (1857-1881) (Spaulding n.d.). Thus, Ada E. was Horace’s second wife, which explains why the census form reports that she had had two children of whom one was still living; presumably that one was Arline, leaving the “Sr.” in Horace’s name unaccounted for by the census record alone. It is not known why Horace B. Sr. needed a conservator in 1914, however, as he was well enough in 1919 to make an excursion to Florida and report on celery production there to East Hartford market gardeners (*Hartford Courant* 1919). The 1910 census also reports that in the next house lived Horace B. Williams Jr. (aged 28), whose occupation was florist. His wife, Helen L., was from Pennsylvania and was listed as having the occupation of musician. The census form also reports that they had been married for two years and had no children. Next door to them was the family of George A. Williams (aged 77), a market gardener like his half-brother, with an additional notation that appears to read “wholesale.” His wife, Ruth A. (aged 60), was born in South Carolina of Connecticut-born parents. Sadly, the census form reports that in their 34 years of marriage she had borne four children, none of whom were still living. As of 1910, several of George A.’s children by his previous wife were still living with him: Julia A. (aged 28), Franklin A. (aged 21), and Florence H.

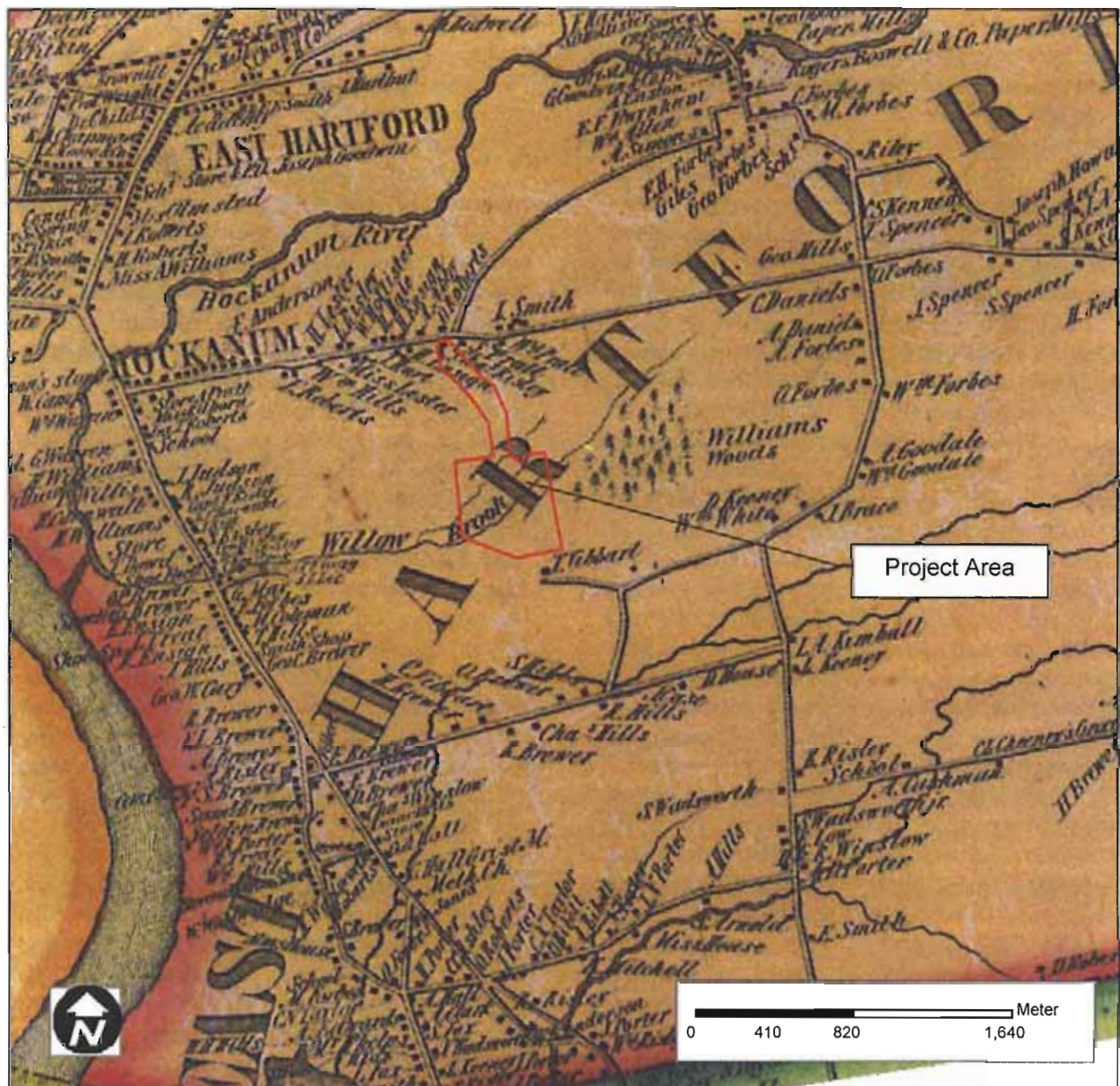


Figure 30. Excerpt from an historic 1855 map of Hartford County depicting the proposed project area (Woodford 1855; collection of Library of Congress).

Barrett (aged 25) and her husband Charles F. Barrett (aged 28). The latter was from Massachusetts and he appears to have been working as an automobile salesman, although the census form is difficult to read (United States Census, 1910, Series: T624 Roll: 131 Page: 82). The Center Cemetery records include George A. Williams (1835-1916) and his wives Mary Adelia Pitkin (1838-1873) and Ruth A. Olmsted (1849-1930) (Spaulding n.d.). Except for George A.'s

son-in-law, then, the Williams family was involved in the supply of food and flowers, most likely to the Hartford market. It is quite likely that they also grew tobacco. The fact that the son-in-law's occupation was not farming is consistent with a transition occurring throughout Connecticut during this time period. The early twentieth century was already the middle of the end for farming as a common occupation except in the more rural areas of the state.



south bank of the Hockanum and on the west side of Main Street (Goodwin 1879). He was probably sympathetic to the abolitionist cause, since in 1844-1845 he employed an escaped slave from Maryland, named James Watkins, whom one of his young daughters taught the beginnings of literacy (Watkins 1852/2001). Horace Williams appears to have owned substantial lands, including much of the eastern part of the Area of Potential Effect. The 1855 map of the vicinity

clearly shows a “Williams Woods” in the vicinity of the proposed project parcel (Figure 30). This is a clear indication that the Williams family’s ownership of part of the Area of Potential Effect goes back to at least 1850, if not earlier, as such toponyms usually take some years to become attached to a landscape feature. Thus, it also seems that at least some of these parcels that were sold to Pratt & Whitney in 1929 had been wooded for a great length of time. In a town like East Hartford, with its very active agricultural sector, this suggests that the land was at the low end of suitability for cultivation. The above-reference ditches on the property also indicate that at least some of it contained standing water and/or wetland areas, less than ideal conditions for prehistoric or historic period habitations. Nevertheless, Thomas Malumphy did put at least part of it into tobacco production, but as was discussed in the Pratt & Whitney history section above, the area located to the east of the Area of Potential Effect remained wooded well into the twentieth century, which also argues for poor land quality there.

As noted above, Horace Williams appears to have resided on the west side of Main Street. An administrator’s deed from 1876 indicates that Horace Williams had died by that date (East Hartford Land Records 27/492). In addition, the cemetery records compiled by Spaulding include a Horace Williams whose dates are 1807-1875, as well as two wives, Mary Ann Williams (1807-1848) and Mary Bridgman Williams (1822-1864), and a daughter, Catherine E. (1833-1856). The 1860 census lists Horace Williams as a 52-year-old farmer, whose real estate was worth \$8,000 and personal estate was \$29,600. His household consisted of his wife, Mary B., aged 37; children George A. (aged 24), Mary A. (aged 22), Julia I. (aged 20), Ellen H. (aged 8), Horace B. (aged 5), and Kate V. (aged 1). The form also lists servants named Mary Caine (aged 20), Thomas Agan (aged 25), Miles Mahan (aged 22), and Charles Freeman (aged 17), the first three being of Irish nativity (United States. Census, 1860, Series: M653 Roll: 79 Page: 913). During this time period, it was common for servants and laborers to be considered part of the household and to live either in the house or other nearby structures. In 1870, the census reports substantial changes in Horace Williams’ household. The now

62-year-old Horace was still listed as a “Farmer,” but his real and personal estate had increased in value to \$23,650 and \$35,828, respectively. He was living with his third wife, Paulina (aged 68), who owned \$2,834 in personal estate of her own. The household also included William M. Miller (aged 30), merchant, his wife Augustine (aged 32), and their son William M. Jr. (aged 4); Nellie H. Williams (aged 18), Horace B. Williams (aged 15), and Kate V. Williams (aged 11); and two female Irish servants and five male Irish laborers. Presumably, the Millers were Horace’s new stepfamily. George A. Williams (aged 34) was living next door with his wife Mary Adelia (aged 32) and their children Mary Adelia (aged 2) and George Lewis (aged 1). At that time, George A. owned only \$4,399 in personal estate; thus, we can speculate that he was still working his father’s farm, even though he had his own household. By the standards of the time, Horace Williams was a wealthy man with extensive landholdings. His publicly recorded activities, such participation in the tobacco growers’ convention and the work on the bridge, indicate that he was socially prominent and active in the community. He was, for example, also town treasurer in 1838 (Goodwin 1879). Unlike some of the other landowners in the areas, the Williams were a family that had been in East Hartford since at least the early nineteenth century, and the partial list of Horace’s activities suggests he was a typical New England gentleman farmer who was engaged in a variety of occupations, all of which increased his prosperity. It also appears that his sons followed his pattern, though his grandchildren did not. Unfortunately, it is not clear how much the Williams’ ownership of part of the Area of Potential Effect affected its physical integrity. As has already been noted, much of the area they seem to have owned in or near the Area of Potential Effect was wooded, even in the mid-nineteenth century, and the descriptions of the acreage are not clear enough to identify the various parcels’ locations any more specifically.

Thomas J. Malumphy – Parcel F

When Thomas Malumphy sold Parcel F to Pratt & Whitney in 1929 (see Figure 28), the deed did not specify what the acreage was, though it reserved to Malumphy the right to grow and

harvest crops during the 1929 season (East Hartford Land Records, Vol. 97, Pg. 108). It did not, however, indicate that there was a tobacco shed or any other structures on the property. Presumably the nearby parcels C, D, and E contained facilities sufficiently close to store and dry tobacco harvested from Parcel F. According to the 1910 Census, Thomas J. Malumphy (aged 39) lived on Silver Lane and worked in the pickle factory. He was born in Connecticut, but his parents were both from Ireland. His wife, Ethel B. (aged 28) was born in New Hampshire of parents from New Hampshire and Vermont. After five years of marriage Thomas and Ethel had one son, Stuart C. (aged 1) (United States Census, 1910, Series: T624 Roll: 131 Page: 79). By 1920, the small family had not changed except in age and in the fact that Thomas's occupation was listed as farmer and traveling salesman for the pickle factory (United States Census, 1920, Series: T625 Roll: 181 Page: 105). In the 1930 census, after the sale of Parcel F to Pratt & Whitney, the 49-year old Thomas was listed as owning a house worth \$11,000 and a radio. The 1930 census form also recorded that he had become Vice President and Sales Manager of the pickle manufacturing company. His son Stuart (aged 21), still living at home, was a salesman for the company as well (United States Census, 1930, Series: T626 Roll: 262 Page: 148). He was, by this bare recounting of facts, an American success story: the son of immigrants who worked hard and ultimately became a landowner and a company vice president. Clearly, his desire to own land and work in farming was strong, as he combined it with an equally time-absorbing career in sales.

Thomas Malumphy had bought Parcel F from Richard Flynn in 1918. That deed indicated that the property parcel contained 6.5 acres and "buildings." It is possible that these were tobacco drying sheds; it is not likely that they included a significant housing structure, as those were usually listed as houses. The deed also listed vague rights of way that Malumphy's deed to Pratt & Whitney failed to mention (East Hartford Land Records, Vol. 59, Pg. 158). Flynn, in turn, had bought the parcel from Ann B. Lang in 1914, a transaction that described it as including 7 acres, buildings, rights of way, and personal property; that deed reserved to Lang the "use and control" of the property for her "natural life" (an

interesting phrase used in historic deeds to distinguish between this life and the next) (East Hartford Land Records, Vol. 51, Page 588). No details about Flynn or Lang have been found in the census records.

Antonio & Angeline Cardillo-Parcels G & H

Parcels G (10 acres) and H (5.75 acres) depicted in Figure 28 were sold to Pratt & Whitney together in one deed, reserving the right to use the land and sheds for the 1929 growing season. The description of the 10-acre Parcel G, the more southerly one, specifically mentions sheds, with the poles and laths (East Hartford Land Records, Vol. 97, Page 125). Antonio and Angeline Cardillo had purchased 4.5 acres of Parcel G in January 1912 for \$300 from the estate of Walter W. Pratt, who had been declared an incapable person, with Howard R. Pratt acting as his conservator (East Hartford Land Records, Vol. 50, Pg. 510a). In April 1912, they bought Parcel H (described then as measuring 5 acres in size) and another 4 acres of Parcel G for \$5,000 from the estate of George Edwin Pratt, an "incompetent" whose conservator was Bethia A. Pratt. This purchase also included Pratt's 1.5 acre house lot on Silver Lane (East Hartford Land Records, Vol. 50, Page 510b). Antonio Cardillo was listed in the 1910 census as a farm laborer who was boarding on the farm of Alexander Frank on Silver Lane in East Hartford. Both Cardillo and Frank were Italian-born but spoke English. Cardillo had arrived in the United States in 1906, and Frank in 1889; however, neither had applied for citizenship at that time (United States Census, 1910, Series: T624 Roll: 131 Page: 79). In the 1920 census, Antonio Cardillo (aged 32) lived with his wife Angeline (aged 28) and their son Marvin A. (aged 4) in a home on Silver Lane that they owned under mortgage, and part of which they rented to two other families. Antonio's occupation was listed as "tobacco farmer" and his date of entry to the United States was given as 1904. His wife's date of admittance to the country was listed as 1897. The census form indicates that neither was a citizen (United States Census 1920, Series: T625 Roll: 181 Page: 106). In 1930, the year after the sale of Parcels G and H to Pratt & Whitney, the Cardillos still lived in a house on Silver Lane,

then worth \$6,000 (and partly rented to another family for \$29 per month), and Anthony (not Antonio any longer) worked as a laborer in the pickle shop (United States Census 1930, Series: T626 Roll: 262 Page: 155).

The Pratts, from whom the Cardillos bought their property in 1912, were part of a family of very long standing in East Hartford. According to the 1910 census, just before the sale to the Cardillos, the George E. Pratt who lived on Silver Lane was 79 years old. He lived with his 76-year-old wife and their son Walter, aged 39. They were married for 43 years and had three children. George's wife worked at keeping house, and Walter was farmer (United States Census, 1910, Series: T624 Roll: 131 Page: 79). In the preceding decade, ca. 1900, the family was living on Silver Street – George was a farmer, living with his wife Bertha and sons James P. (aged 30), a market gardener; Walter W. (aged 28), a farmer; and Howard R. (aged 24), a carpenter (United States Census, 1910, Series: T623 Roll: 135 Page: 247).

George E. Pratt had purchased 4 acres of Parcel G from Alexander B. Trimble in 1876 for \$300 (East Hartford Land Records, Vol. 31, Page 279). In addition, he had bought the 5 acre Parcel H in 1897 from the estate of James F. Comstocks, deceased, for \$100.00. That deed specifically describes Parcel H as “woodland” (East Hartford Land Records, Vol. 42, Page 156). Before this, in the 1870 census, George E. and Berthia Pratt were 38 and 35 years old, respectively. At that time, they were only a few years married and had a nine-month-old son named “James P.” George Pratt's occupation was listed as “Joiner.” According to the census form, he owned no real estate and had \$250 in personal estate (United States Census, 1870, Series: M593 Roll: 102 Page: 186). In 1860, George E. Pratt (aged 28) was an unmarried joiner, living with his apprentice Samuel A. Pratt (aged 20), presumably a relative (United States Census, 1860, Series: M653 Roll: 79 Page: 937). Whether George E. Pratt's change of profession to farming resulted from his work as a joiner or from the inheritance of some money or property from his relatives is not known. It is assumed, based on the available documentation, that George E. Pratt lived to the north of the Area of Potential Effect since the 1912 deed to the

Cardillos included the 1.5 acre house lot, the description of which places it in the vicinity of other parcels researched here.

The Pratt family is of particular interest with respect to this project because one of them owned the house of which Goodwin (1879:222) reported that “[e]ighty rods south of this house stood an Indian wigwam, inhabited (about 1775-80) by a remnant of one of the tribes once living about here.” This description of eighty rods (1,320 feet) could place this wigwam within the Area of Potential Effect. Goodwin explained that the house he referred to was the one built by Eliab Pratt in 1740, which was replaced with another on the same site by approximately 1858, and which was occupied by Mr. George W. Pratt at the time of Goodwin's writing. The exact location of this house has not been pinpointed, but it is suggested by the 1870 census form that George W. probably lived next door to George E., since his name appears immediately after George E. in the schedule. In 1870, George W. was a 58-year-old farmer who owned \$3,000 in real estate and \$1,500 in personal estate. His household consisted of his presumed wife, Mary M. (aged 56); one Emily Wadsworth (aged 59); three common laborers, Harmon Hancock (aged 67), Watson V. Vibert (aged 23), and Anthony Mageehan (aged 23), the last of whom was Irish-born; as well as one Margaret Pratt (aged 24) (United States Census, 1870, Series: M593 Roll: 102 Page: 186). The need for resident laborers suggests a fairly large and active farm, though apparently not one directly connected to the Area of Potential Effect. George W. Pratt does not appear in the 1860 census; however, the presumption of his residence in the area at that time is further supported by a parcel description in a 1902 deed to a house lot on Silver Lane near the Area of Potential Effect that mentions the estate of George W. Pratt as an abutting landowner (East Hartford Land Records, Vol. 46, Pg. 89).

The problem of locating this potential wigwam site requires research in the land records that is beyond the scope of the current project, though it is unlikely it has survived the twentieth century's multiple disturbances of the ground in the Rentschler Field area. Historic maps are not very helpful to solving this problem because next door to the two George Pratts there was also a

Solomon Pratt in the 1860 and 1870 censuses, as well as an Arthur Pratt in the 1900 one. The 1884 map shows two “Pratt” houses on Silver Lane approximately north of the Area of Potential Effect, neither with a first name listed (Hyde & Company 1884; Figure 32). According to the 1869 map, there was both an “S. Pratt” and a “G. Pratt” approximately north of the Area of Potential Effect (Baker & Tilden; Figure 31). Likewise, the 1855 map shows an “S. Pratt” and another Pratt that could be either “Wd” for

“Widow” or “Wm” for “William” (Woodford; Figure 30). None of these historic maps is accurate enough to reliably locate the potential wigwam site except in the most general terms.

Edwin H. Richards and George A. Cooley-Parcel J

Edwin H. Richards and George A. Cooley sold two pieces of land to Pratt & Whitney in 1929, but only the first, a 7 acre parcel labeled as Parcel J in Figure 28, is relevant to the current

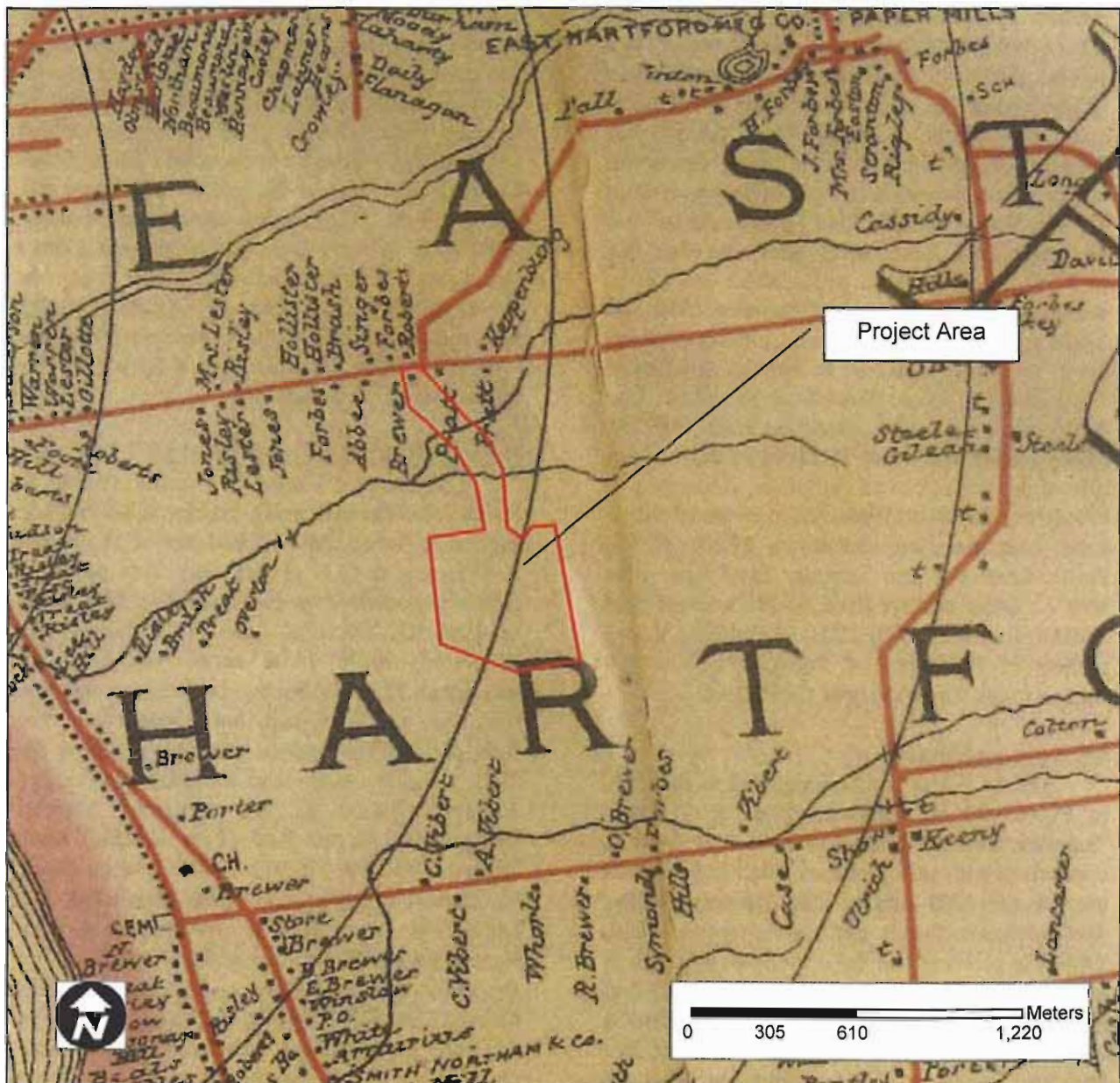


Figure 32. Excerpt from an historic 1884 map of Hartford County depicting the proposed project area (Hyde & Company 1884; collection of Connecticut State Library).

investigation. Richards' and Cooley's sale of Parcel J included "poles and lath," and they also reserved the right "to grow, harvest and cure the 1929 crop of tobacco on said first piece" (East Hartford Land Records, Vol. 97, Page 100). According to the 1920 census, Richards and Cooley were neighbors on South Main Street in the Silver Lane District, and Cooley worked as a farmer of a tobacco farm, while Richards worked as a farm worker on a general farm (United States Census, 1920, Series: T625 Roll: 101 Page: 108-109). The land records also indicate that they were active in the East Hartford real estate market, as there are full pages of transaction entries for each of them in the grantee book. They had bought Parcel J in 1919 from Edward Risley. At the time of that transaction, it was described as a 6 acre piece of brush land, though the description mentions a ditch along the south property line, as well as a right of way to it from Willow Street (East Hartford Land Records, Vol. 59, Page 494). Thus, it is clear that that this particular piece of land was cleared and put to growing tobacco some time between 1919 and 1929, possibly for the first time, although "brush land" was most likely to be former agricultural fields that had been allowed to lie fallow. The descriptions in other parcels indicate that the Risley family was much involved in the western side of this area from an early date. According to Goodwin, "Jonathan Risley lived south of Silver Lane, near the southwest corner of Mr. G. W. Pratt's land. His son Timothy lived here after him. ... Other Risleys lived on Main Street near Willow Brook" (1879, 222). It is likely that a portion of the Area of Potential Effect also formerly was the property of the Risleys.

Ida E. Bryan-Parcel K

This 11.9 acre parcel designated as Parcel K in Figure 28 was sold to Pratt & Whitney "together with the poles and laths now used in connection with said premises," and reserving its use for the 1929 season. This language in the deed indicates that it too was a tobacco field, subject to plowing and the installation of poles to hold up the shading cloth (East Hartford Land Records, Vol. 97, Page 123). Ida Bryan inherited the property in 1922 from the estate of her husband, Daniel L. Bryan. The certificate of devise describes Parcel K as measuring 12.5 acres

in size with buildings situated thereon. The same deed also conveyed a 1.5 acre piece of land with buildings on Central Avenue; this may have been the family home (East Hartford Land Records, Vol. 69, Page 475). According to the 1920 census, however, at that time the Ida and Daniel (aged 64) lived on Wells Avenue. Daniel was described as a retired farmer. He was born in Connecticut of Irish-born parents; Ida (aged 63) was a Connecticut native of at least two generations. They owned their own home and had two sons living with them: Charlie S. (aged 34), who worked as a clerk in an insurance office, and George D. (aged 29), who worked as a farm helper and at odd jobs, as well as a granddaughter, Mildred D. (aged 9). The census form is not clearly written, but it seems to indicate that Charlie was divorced, which suggests that Mildred was his child (United States Census, 1920, Series: T625 Roll: 181 Page: 40). Divorce was quite unusual at the time, but the granting of custody to the father was not. Daniel Bryan was another immigrant's son who was successful, acquiring land and acquiring enough education for one of his to become a white-collar worker at a time when that was a career with far more potential than farming.

Heirs of Elisha C. Brewer-Parcel M

The heirs of Elisha C. Brewer, Fannie B. Smith (also the executrix), Harriet E. Morse, and Frederick Brewer Morse, sold Parcel M to Pratt & Whitney in 1929 (Figure 28). This parcel of land was described as encompassing 30.14 acres of land. Of the total land, 16.05 acres was cultivated, while 14.09 acres was brush or woodland. The deed for this land did not mention buildings, poles, or lath, but it did reserve the right to lease the land or grow crops during the 1929 tobacco season and the parcel is located directly adjacent to the American Sumatra Company's tobacco land (East Hartford Land Records, Vol. 97, Pg. 91). In 1902, when Elisha C. Brewer's estate was first distributed, the named heirs were Delia P. Brewer (his widow), Fannie Brewer Smith (daughter), and grandsons Frederick Brewer Morse and William Everett Morse (East Hartford Land Records, Vol. 46, Pg. 89). The grandsons of a different family name clearly suggest the existence of another daughter, who had predeceased her father. The land

distribution itself included a “homestead” with buildings on Silver Street and a parcel “formerly” of 37.28 acres, which became Parcel M. The document also refers to an 1888 map by William H. Olmstead, which is not indexed in the East Hartford land records. It also states that in accordance with the will, the interests of Delia P. Brewer and Fannie Brewer Smith were limited to a life use, so in effect the land was left to the grandsons with a double life use encumbrance.

According to the 1910 census, the childless widow Fannie B. Smith (47) lived in the household of her mother, the widow E. H. Brewer (82), and also with the widow Harriet E. Morse (49) and her two sons Fred B. (26) and William E. (21). There must have been some confusion on the census-taker’s part about E. H. Brewer’s relationship with Fannie B. Smith, as according to the will her mother must have been Delia P. Brewer. The two Morse boys were, of course, Elisha C. Brewer’s grandsons, named in his will several years before. The fact that Elisha left his property to the grandsons, rather than the surviving daughter and daughter-in-law, is typical of late nineteenth century landowners. The object of designating heirs was, naturally, to provide for them and their children, and the grandsons were also the ones who would carry on Elisha’s posterity. The occupation column of the 1910 Census indicates that Fred Brewer operated a general farm, while William worked as a quartermaster (United States Census, 1910 Series: T624 Roll: 131 Page: 79). In 1930, just after the sale of Parcel M to Pratt & Whitney, Fannie B. Smith (aged 67) was listed as the head of the family. At that time, she owned a house on Silver Lane worth \$12,000 and lived with her sister Harriet E. (aged 69) and unmarried nephew Fred B. (aged 46), who worked as a farm laborer. Oddly, according to a 1931 map of the area, a piece of land in the vicinity was still owned by the Estate of E. C. Brewer (Figure 29).

The sale of part of what would become Parcel M, mentioned in the 1902 distribution, was made in 1897 to A.A. Forbes and W.G. Forbes, whose names appear in various parcel descriptions researched here. According to that deed, the parcel contained 7 acres, 25 rods and a building in the “Willow Brook District” (East Hartford Land Records, Vol. 39, Pg. 372). Elisha C. Brewer had bought the whole parcel, then

described as 33 acres in size, in 1859, together with a 6-acre piece with buildings on the south side of a highway (possibly Silver Lane) for \$1,900 from Charles B. Risley (East Hartford Land Records, Vol. 25, Page 254). The length of time between 1859 and the 1929 sale to Pratt & Whitney makes it difficult to say for certain how the land was used; however, as has already been noted, brush land could easily be former agricultural fields, and the Census record indicates that Brewer was a farmer. In 1870, Elisha C. Brewer (aged 49) lived with his wife Delia P. (aged 46) and their daughters Emma (aged 13), Hattie (aged 9), Fanny (aged 7), and Mary (aged 5). Elisha’s occupation was listed as “Farmer,” and he owned \$4,000 in real estate and \$850 in personal estate (United States Census, 1870, Series: M593 Roll: 102 Page: 186). In 1860, just after he bought the land, he also lived with Delia and one daughter, Emma (aged 3), and owned \$2,000 in land and \$600 in personal estate (United States Census, 1860, Series: M653 Roll: 79 Page: 937). The Brewers are another family with deep roots in East Hartford, and according to other parts of the title search, many of their relatives lived nearby. Unlike some of the other families discussed here, however, Elisha Brewer’s family seems to have dwindled in size and wealth over time, at least once he had passed on.

Summary

The above-referenced historic data provides an examination of the general history of the project region, a review of the former ownership the Rentschler Field area, and an examination of historic land use patterns in the project vicinity. A review of this type, rather than a superficial search of historical records provides many details with which to interpret the depositional and archaeological context of the Area of Potential Effect. The map research, together with the title search results and research on the individual owners, indicates that the Rentschler Field area consists a landscape that has been highly impacted by agricultural production throughout the late nineteenth and early twentieth centuries. The Area of Potential Effect itself appears to have been in an agricultural section of the region, while portions of the related property further east may have been wooded for many years. The

crops grown on the Area of Potential Effect certainly included tobacco in the early twentieth century, and may have included both tobacco and food crops in earlier times. Impacts to the landscape during this time period were substantial. Plowing for tobacco and other crops would have had the widest effect. More localized effects resulted from the excavation of a network of drainage ditches that is depicted on a map of the Area of Potential Effect and its surroundings (Figure 33). This map shows numerous ditches as dashed lines, as well as large areas of wetlands

surrounding the proposed project area. This map confirms that the area was either marshy or inclined to become so in rainy weather, which suggests that its sensitivity for prehistoric resources was low even before these European agricultural impacts. Also, in the early twentieth century, most of the agricultural fields seem to have had shade tobacco grown on them, with the facilities for these including large drying sheds whose precise location is unknown, and rows of poles dug into the ground to support the tenting, as well as more plowing.

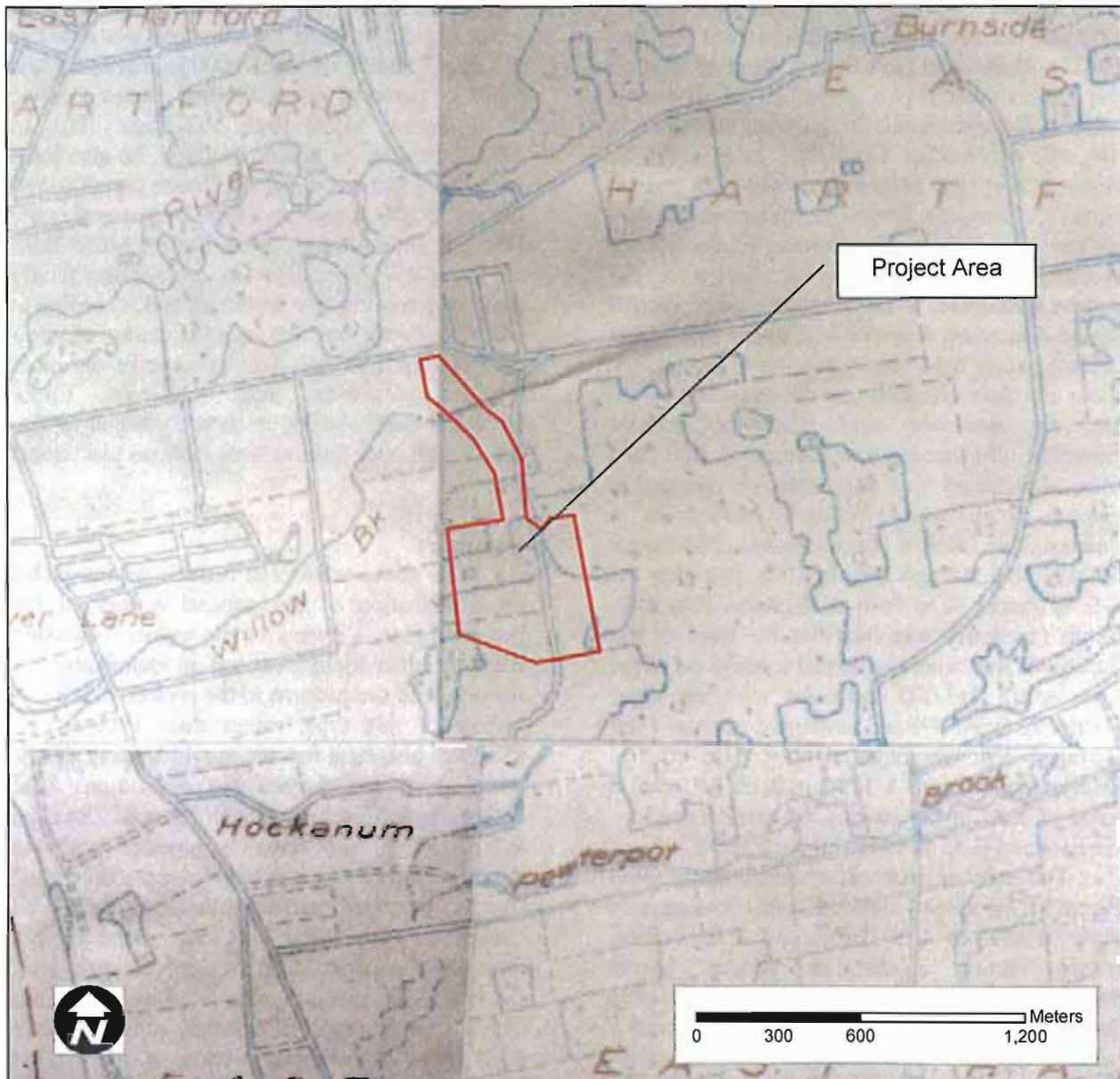


Figure 33. Excerpt from a 1928 topographic quadrangle depicting the proposed Cabela's Development Project within Rentschler Field in East Hartford, Connecticut

Following all of this, the Pratt & Whitney Aircraft Company bought the property in 1929 and built an airfield over the southern portion of the Area of Potential Effect, a process that involved grading and leveling the ground to the point of perfect smoothness. In time, the airfield was supplemented with a series of asphalt runways and lights. The northern portion of the Area of Potential Effect seems to have escaped post-agricultural impacts until 1942, when much of it had a military installation constructed on it. This, in turn, was demolished before 1948, when the area was re-graded and leveled. This interesting history of the proposed Cabela's

Development Project offers insight into an eclectic assortment of early East Hartford landowners. The past owners of the property were a varied group, ranging from old wealthy local families to new immigrants planting a first foothold in American real estate, from people who owned and kept one or two pieces of land to some who bought and sold multiple parcels for profit. This group of people once connected to currently proposed project area is a microcosm of American society in the era before automobiles and suburbanization, as well as before Frederick B. Rentschler moved his factory and his history to East Hartford.

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previously archeological sites recorded in vicinity of the proposed project area in East Hartford, Connecticut. This discussion provides comparative data, as sparse as they are, for assessing the results of the current Phase I cultural resources reconnaissance survey, and it ensures that the potential impacts to all previously recorded cultural resources located within the general vicinity of the Area of Potential Effect are taken into consideration. Specifically, this chapter reviews all previously recorded archeological sites situated within 1.6 km (1 mi) of the currently proposed project area (Figure 34).

The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Commission. In addition, the electronic site files maintained by Heritage Consultants, LLC also were examined during the course of this investigation. Both the quantity and quality of the information contained in the examined cultural resources survey reports and site forms are reflected in this document.

Previously Recorded Archeological Sites Located Within 1.6 km (1 mi) of the Currently Proposed Project Area

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage Consultants, LLC resulted in the identification of eight previously recorded archeological sites (43-4, 43-5, 43-8, 43-9, 43-12, 43-13, 43-15, and 43-22) located within 1.6 km (1 mi) of the currently proposed project parcel (Figure 34). While none of these eight sites are

situated within the proposed Area of Potential Effect associated with the Cabela's Development Project, they provide basic contextual data with which to evaluate the currently proposed project area in terms of its likelihood to produce additional cultural resources. The eight previously recorded sites named above are discussed in detail in the following paragraphs.

Site 43-4, recorded by Gradie and Rivers, was characterized by a surface expression of prehistoric artifacts dating from the Archaic to Woodland periods (Figure 34). No excavation of the site area was made and no specifics about what types of artifacts recovered were documented on the submitted site form. Finally, Site 43-4 was not assessed applying the National Register of Historic Places criteria for evaluation. No recommendations concerning additional testing of the site area were noted on the submitted site form.

Site 43-5, also known as the Holiday Inn Site, was described as an unknown type of site dating from the Archaic and Woodland periods (Figure 34). Gradie and Rivers also recorded this site. According to the submitted site form, Site 43-5 represents a campsite; however, the types of cultural material collected from the site area were not reported on the submitted site form, and there is no indication that the site was actually tested. Finally, this site, like Site 43-4 was not assessed applying the National Register of Historic Places criteria for evaluation. No recommendations concerning additional testing of Site 43-5 were noted on the submitted site form.

Site 43-8, also known as the "Second Largest Site," was described as a scatter of artifacts representing a Contact Period occupation (Connecticut Archaeological Survey

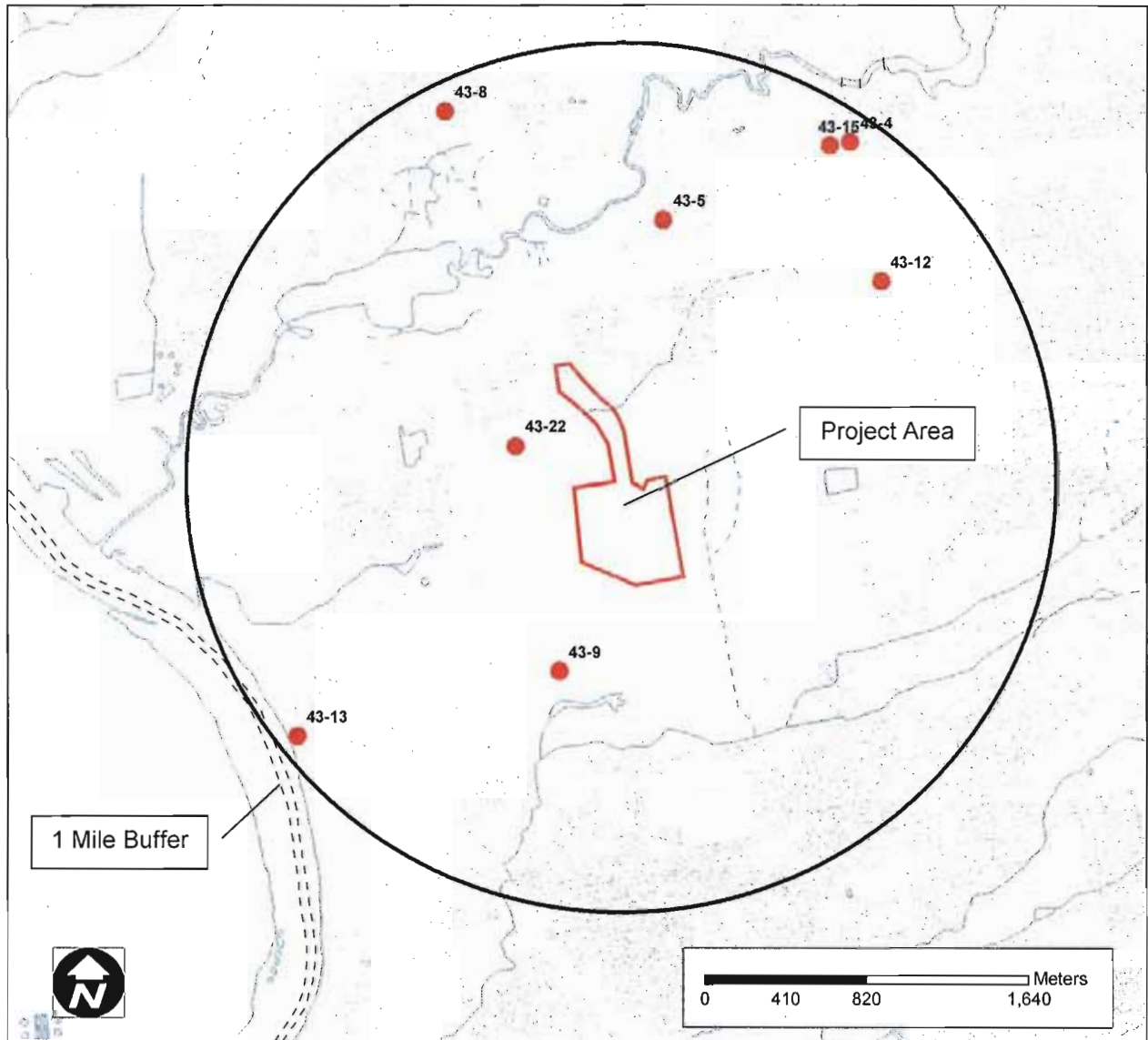


Figure 34. Map of previously identified cultural resources situated within 1.6km (1.0 mi) of the proposed Cabela's Development Project within Rentschler Field in East Hartford, Connecticut

n.d.). Thought to represent a Podunk palisaded village by Spiess and Bidwell (1924) and Goodwin (1879), the site area was presumed to be the fortification mentioned in historic documents as the village of Tantinomo (Figure 34). Unfortunately, the site area is now covered with modern development and it has likely been destroyed. According to the submitted site form, Site 43-8 was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no recommendations concerning additional testing of the site area were made.

Site 43-9, which is named the Hockanum Village Site, was described as Contact Period village site thought by some to be associated with the Podunk Indians (Figure 34). Aside from this association, little is known about this site. In fact, its actual location has never been verified, and it is possible that it is the same location as that reported for Site 43-22, which has been plotted in the vicinity of Willow Brook where a major building complex associated with Pratt & Whitney now stands. It is likely that Sites 43-9 and 43-22 (if they are in fact two separate occupations) have been destroyed. Sites 43-9

and 43-22 have not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]); no recommendations concerning additional testing of these sites were made on the submitted site forms.

Site 43-12 (the Leone Site) was described as a surface scatter of prehistoric lithic artifacts dating from the Middle and Late Woodland Periods (Figure 34). Richard Colson conducted surface reconnaissance of the site area and it resulted in the collection of two chert projectile points. The integrity of Site 43-12 was described as destroyed on the submitted site form, and the site was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional recommendations concerning the site area were indicated on the submitted site form.

Site 43-13, the Ensign Street Burial Grounds, was described as burial location dating from the Contact Period (Figure 34). Identified by workers digging in the field containing the site area recovered an unknown number of Native American burials. According to the submitted site form, a single skull from the site area is housed at Yale's Peabody Museum. Site 43-13 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) and recommendations regarding the treatment the site area were not provided on the submitted site form.

Finally, Site 43-15, the Roberts Street Site, was described as an unspecified site type dating from the Archaic and Woodland Periods (Figure 34). The site area, recorded by Fred Warner and surface collected by avocational archaeologists for a number of years, has been destroyed according to the submitted site form. Site 43-15 was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No recommendations concerning additional testing of the site area were made on the submitted site form.

Summary

As the above-referenced discussions indicate, the area surrounding Rentschler Field and the proposed project area has been occupied

by both prehistoric and Contact Period Native American groups, including presumably the Podunk Indians. Site types noted in the area range from small encampments to large fortified villages. These sites undoubtedly were situated in this area because of its proximity to the Connecticut and Hockanum Rivers, as well as numerous streams and wetlands such as Willow Brook and Pewterpot Brook. These sources of fresh water would have provided abundant natural resources, and the Connecticut and Hockanum Rivers both would have served as transportation routes for local groups. Unfortunately, from a contextual point of view, the previously identified sites provide little comparative archaeological data because they either were not excavated by professional archaeologists or they have been destroyed by modern development processes.

Further, because many of the locations of these sites have been plotted on the basis of historical narratives only (i.e., their field locations either have not been or could not be verified), their positions with respect to the proposed project areas are difficult to ascertain. For example, according to Archaeological and Historical Services, Inc., the archaeologically sensitive portions of Development Area D of the current project area were deemed significant because they were thought to be located "...within the areas designated by Spiess as the location of a Podunk village" (Forrest et al. 2006:23). A review of archaeological site forms on file with the Connecticut State Historic Preservation Commission indicated that two separate site forms (43-9 and 43-22) have been submitted that may apply to this Native American village. The first, 43-9, places the site area in the vicinity of Runway 4/22 of Rentschler Field, while the second, 43-22, indicates that it was located adjacent to Willow Brook, which now is the site of a large Pratt & Whitney building complex. In either case, the site(s) likely been destroyed by development of the aeronautical facility. Despite these locational problems, the recordation of eight sites within a mile of the proposed project area suggests that the area was used often during prehistoric times, with some site areas likely representing semi-permanent to permanent occupations.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methodology used by Heritage Consultants, LLC to complete the Phase IB cultural resources reconnaissance survey of the currently proposed Cabela's project area. It also includes a discussion of the laboratory methods used during the investigation, as well as the procedures utilized to process and analyze the cultural material recovered during survey. Finally, the location and point-of-contact for the final facility at which all cultural material, drawings, maps, photographs, and field notes generated during survey will be curated is provided below.

Research Design

The current Phase IB cultural resources reconnaissance survey was designed to identify all prehistoric and historic archaeological resources located within the "archaeologically sensitive" portions of the proposed project area described in Chapter I of this report. Fieldwork for the project was comprehensive in nature; planning took into account the results of the Phase IA cultural resources assessment survey performed by Archaeological and Historical Services, Inc., (Forrest et al. 2006); the distribution of previously recorded archeological sites located near the proposed project parcel; and a historical assessment of the region containing the Area of Potential Effect.

The methods used to complete this investigation were designed to provide complete and thorough coverage of those areas previously determined to be "archaeologically sensitive" (see Forrest et al 2006 for the methods by which the designation of sensitive areas was

accomplished). The current undertaking entailed pedestrian survey, systematic subsurface testing, mapping, and photo-documentation (see below).

Field Methods Utilized During the Phase IB Cultural Resources Reconnaissance Survey

During the survey effort, the proposed project area was subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, systematic shovel testing along survey transects, mapping, and photo-documentation. The pedestrian survey portion of the investigation included visual reconnaissance of all areas scheduled for impacts by the proposed Cabela's development project. Following the completion of the pedestrian survey, representatives from Heritage Consultants, LLC subjected the previously identified "archaeologically sensitive" portions of the proposed project area to systematic subsurface testing and photo-documentation. Those areas determined not to be archaeologically sensitive were not investigated using subsurface methodologies, as Forrest et al. (2006) previously determined that they no longer retained either depositional integrity or the potential to produce intact cultural deposits. Nevertheless, the sampling strategy employed during the subsurface testing portion of the investigation was designed to provide coverage of all portions of the proposed project area that were deemed to be "archaeologically sensitive" by Forrest et al. (2006).

Because the pedestrian survey and informant interviews, as well as the examination of numerous historic maps and aerial photographs, indicated that significant amounts of fill deposits and/or evidence of significant past disturbances

had occurred within the proposed project parcel, Areas C1, D, and the Area Outside the Development Areas were examined using shovel tests positioned at 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) apart. Area E, in contrast, was previously identified by Archaeological and Historical Services, Inc., as the possible location of a Native American wigwam site dating from the late eighteenth century (Forrest et al. 2006). As such, the “archaeologically sensitive” portions of Area E were examined through the excavation of shovel tests placed at 15 m (49.2 ft) intervals along survey transects spaced 15 m (49.2 ft) apart. The above-described survey methodology was approved by Dr. David Poirier of the Connecticut State Historic Preservation Office prior to initiation of the survey, and it is in keeping with the Phase I cultural resource reconnaissance survey guidelines as they are promulgated in the *Environmental Review Primer for Connecticut’s Archaeological Resources*.

During survey, a total 173 of 179 (97 percent) planned shovel tests were excavated successfully throughout the archaeologically sensitive areas associated with the proposed Cabela’s development project. Each shovel test measured 50 cm (19.7 in) in size and each was excavated to a minimum depth of 50 cm (19.7 in), below surface. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within identified strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Finally, each shovel test was backfilled immediately upon completion of the archeological recordation process.

Site Recordation and Delineation

As is discussed in greater detail in the next chapter of this document, four non-site cultural resources loci (Locus 1 through Locus 4) were identified and documented during completion of the current Phase IB cultural resources reconnaissance survey. Delineation of these four non-site cultural resources loci was accomplished through additional shovel testing. Delineation was completed in an attempt to

ascertain the nature, size, depth, integrity, age, and cultural affiliation of the identified cultural deposits associated with the non-site cultural resources loci. Site delineation also was used to assess the stratigraphic placement, density, and research potential of the loci, and data was gathered to assist in the subsequent assessment of whether or not the loci were considered not significant, potentially significant, or significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

To accomplish these tasks and when possible, delineation entailed: (1) the establishment of a datum point; (2) surface intensive reconnaissance throughout the loci areas; and (3) the excavation of shovel tests at close intervals along the cardinal directions emanating from the datum. The loci delineation was sufficient to provide the data necessary to make an explicit significance evaluation applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Laboratory Analysis

Laboratory analysis of all recovered cultural material followed established archeological protocols. All field specimen bag proveniences first were crosschecked against the field notes and the specimen inventories for accuracy and completeness. Following this quality-control process, all recovered material was washed by hand, air-dried, and sorted into basic material categories.

The nature and structure of the laboratory analysis was determined by the goals of the project. In general, the artifact analysis consisted of making and recording a series of observations for each specimen. The observations were chosen to provide the most significant and temporally/functionally diagnostic information about each specimen. A single database was employed to store, organize, and manipulate the data generated by the analytical process.

Historic Cultural Material Analysis

The analysis of the historic cultural material recovered during the current Phase I cultural resources reconnaissance survey was organized by class, functional group, type, and subtype. The first level, class, represented the material category, e.g., ceramic, glass, metal. The second

level, functional group, e.g., architecture, kitchen, or personal, was based on classifications established by South (1977). The third and fourth levels, type and subtype, described the temporally and/or functionally diagnostic artifact attributes. The identification of artifacts was aided by consulting standard reference works, including Fike (1987), Florence (1990), Kovel and Kovel (1986), Miller (1980, 1991), Nelson (1968), South (1977), Switzer (1974), and Toulouse (1971, 1977).

Curation

Following the completion and acceptance of the Phase IB Final Report of Investigations, all cultural material, drawings, maps, photographs, and field notes will be curated with:

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RESULTS OF THE FIELD INVESTIGATION

Introduction

As discussed in Chapter I of this document, the proposed project area, which will be the site of Cabela's Outdoor Outfitters, is located within the confines of Rentschler Field and Pratt & Whitney properties in East Hartford, Connecticut. The currently proposed project area consists of a large parcel of open land, 28.6 ac of which was characterized as "archaeologically sensitive areas" by Archaeological and Historical Services, Inc., during a previously completed Phase IA cultural resources assessment survey of the Rentschler Field area (Forrest et al. 2006). As a result of that investigation, portions of the currently proposed development parcel were described as containing, "substantial areas of intact archaeologically sensitive soils" (Forrest et al. 2006:45). These soils were delineated on project area maps and they were recommended for additional Phase IB investigations. These areas are located adjacent to the runways and taxiways of Rentschler Field, to the west of Rentschler Stadium, and at the intersection of the entrance to Pratt & Whitney and Silver Lane (Figures 1 and 2). As depicted in Figures 3 through 7, the survey areas are located within open, flat land characterized by manicured lawns, open patches of dirt, and/or tall grasses and shrubs.

Prior to initiating fieldwork associated with the current Phase IB cultural resources reconnaissance survey, Heritage Consultants, LLC presented a proposed subsurface testing strategy to Dr. David Poirier, Staff Archaeologist of the Connecticut State Historic Preservation Office for approval. Survey methodologies employed during the current investigation were designed to sample the "archaeologically sensitive" associated with Areas C1, D, E and Areas Outside Development Areas in an effort to

determine whether or not intact cultural deposits were present therein. In doing so, pedestrian survey, mapping, photo-documentation, and systematic subsurface testing were conducted. The details of the field methods, as well as the results of this field effort, are reviewed below.

Due to the configuration of the proposed development areas, as well as the previously identified "archaeologically sensitive" areas contained therein and to facilitate control during the survey process, the proposed development areas were divided into separate testing areas. These areas were designated as the Area Outside the Development Areas, Area E, Area D, Area C1-West, and Area C1-East. The separation of Area C1 is a result of it being bisected by Runway A of Rentschler Airfield and therefore required the establishment and use of separate survey transects for each area.

During survey, a total of 173 of 179 (97 percent) planned shovel tests were excavated successfully throughout the "archaeologically sensitive" portions of the Area Outside the Development Areas, Area E, Area D, and Area C1. As discussed in Chapter VI of this document, these shovel tests were excavated at 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) in the Areas Outside the Development Areas and in Areas C1 and D. For reasons discussed below, Area E was examined through the excavation of shovel tests at 15 m (49.2 ft) intervals along parallel survey transects spaced 15 m (49.2 ft) apart.

Of the six planned but unexcavated shovel tests, four fell within drainage ditches, in paved areas, or in areas containing other obstructions (e.g., surface expressions of conduits). Finally, two of the planned but unexcavated shovel tests were not completed because they fell within the confines of the extant bird sanctuary situated to

the south of Area C1. The remainder of this section provides a breakdown of the results of testing of the Area Outside the Development Areas, as well as Areas C1, D, and E.

Results of Phase IB Survey of the Area Outside the Development Areas

This project parcel consists of an open, level parcel of land situated at the intersection of the entrance to Pratt & Whitney and Silver Lane (Figures 2 and 3). According to historic maps of the area, this project parcel once contained a few residential structures. After Pratt & Whitney purchased this property, the structures were demolished. The northern and western portions of this area currently area maintained by Pratt & Whitney as an area of manicured lawn and gardens. The southeastern portion of the area, on the other hand, has been allowed to grow over with tall grasses, weeds, and a few trees.

Completion of the Phase IB cultural resources reconnaissance survey of this area was accomplished through the successful excavation of 16 of 18 (89 percent) planned shovel tests along six survey transects spaced at 30 m (98.4 ft) intervals (Figure 35). The two planned but unexcavated shovel tests fell within a manicured garden in the northwestern portion of the project parcel, as well as in a drainage ditch associated with the entrance to Rentschler Stadium in the southern extent of the project parcel.

Shovel tests excavated throughout the “archaeologically sensitive” portion of the Area Outside the Development Areas exhibited stratigraphy that was widely varying in color, soil texture, and depth. The majority of the shovel tests exhibited two soil strata in profile. Stratum I in these shovel tests consisted of a layer of dark brown (10YR 3/3) sandy loam that reached terminal depths ranging from as little as 10 cm (3.9 in) to as great as 60 cm (24 in) below surface. Stratum II, which was characterized as a deposit of reddish brown (5YR 5/4) sand also varied in depth, ranging from between 10 to 80 cm (3.9 to 32 in) below surface in some places and from 60 to 80 (24 to 32 in) in other places.

In addition, some of the shovel tests excavated within this area revealed three soil strata in profile, with Stratum I represented by a dark brown (10YR 3/3) loamy sand that reached from 0 to 25 cm (0 to 10 in) below surface.

Stratum II in these shovel tests consisted of a deposit of mottled dark brown (10YR 3/3) loamy sand and reddish brown (5YR 5/4) sand; it ranged in depth from between 25 to 60 cm (10 to 24 in) below surface. Finally, Stratum III was described as a layer of grayish brown (10YR 5/2) coarse sand that extended to a depth of 80 cm (32 in) below surface. The shovel tests that exhibited three strata in profile, as well as the large variations in soil stratigraphy in general, appear to represent past disturbances related to building demolition and earth moving throughout the project parcel. Furthermore, shovel testing of the project parcel recovered modern beer bottle glass, plastic, cellophane wrappers, asphalt, concrete pieces, and asphalt roofing shingles in both Stratum I and Stratum II of the shovel tests. Finally, Phase IB testing of the Area Outside the Development Areas resulted in the identification of a single non-site cultural resources locus designated as Locus 1. This newly identified archeological locus identified during survey does not possess the qualities of significance as defined by the National Register of Historic Places criteria of evaluation (36 CFR 60.4 [a-d]). No additional testing of this cultural resources locus, or the proposed Area Outside the Development Areas is recommended. Locus 1 is described in detail below.

Locus 1

Locus 1, which was identified near the entrance to Pratt & Whitney and described as round in configuration, produced a single whiteware sherd (Figure 35). This artifact was recovered from Shovel Test 2 on Survey Transect 1 at a depth of 20 to 30 cm (8 to 12 in) below surface (i.e., from Stratum I, a disturbed topsoil deposit). Additional shovel testing in the vicinity of Locus 1 failed to produce any additional historic or prehistoric artifacts.

Archeological data collected from within and in the vicinity of Locus 1 indicates that no intact prehistoric cultural deposits are present within the currently proposed Area of Potential Effect. Locus 1, an isolated find, does not possess research potential or the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus is recommended.



Figure 35. Plan view of the eastern portion of the Area Outside the Development Areas depicting shovel test locations and Locus 1.

Results of Phase IB Survey of Development Area E

The “archaeologically sensitive” areas associated with Development Area E, which are located to the west of Rentschler Stadium and to the east of a building complex associated with Pratt & Whitney, measure approximately 1.5 ac in area (Figure 2). Pedestrian survey of these areas revealed that they consist of previously leveled areas characterized by a combination of low grasses, open patches of soils, and surface disturbances, including concrete pads and large metal plates (Figure 4). While this area normally is maintained as an open space, it also is used as an overflow parking and “tailgating” area on game days at Rentschler Stadium. As a result, its surface and upper soil strata have been severely impacted by vehicular and foot traffic, and they contain large amounts of modern trash. Furthermore, Archaeological and Historical Service, Inc., during its Phase IA cultural resources assessment survey, concluded, “Development Area E contains somewhat scattered intact soil areas, in part because of filling and rerouting of the southern branch of Willow Brook in this area” (Forrest et al. 2006:36).

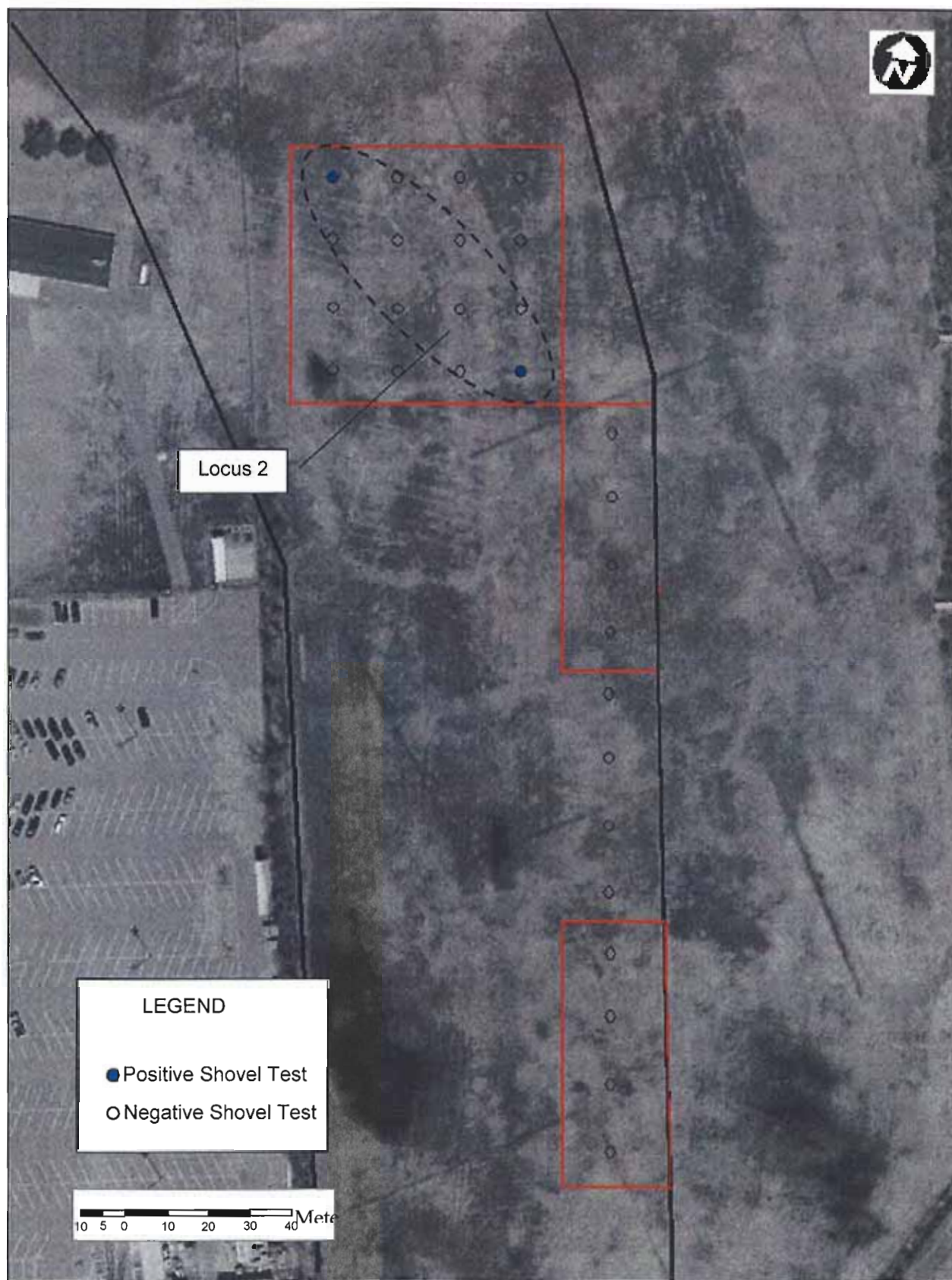
Despite these negative impacts to its integrity, Archaeological and Historical Services, Inc., argued “this area is significant because it contains the location of [a] Revolutionary War-era wigwam site mentioned by Goodwin in 1879” (Forrest et al. 2006). As indicated in Chapter IV of this document, careful examination of historic maps during the background research portion of the current investigation was unable to substantiate the location of this wigwam as reported by Archaeological and Historical Services, Inc. At the request of Dr. David Poirier, staff archaeologist of the Connecticut State Historic Preservation Office, Heritage Consultants, LLC treated this area as if it retained a high probability for producing intact cultural deposits. Thus, the area was examined thoroughly by excavating 28 of 28 (100 percent) planned shovel tests at 15 m (49.2 ft) intervals along five parallel survey transects spaced 15 m (49.2 ft) apart (Figure 36).

The excavation of shovel tests within the “archaeologically sensitive” areas associated

with Area E revealed widely varying stratigraphy in terms of depth, color, and soil textures represented. That is, some of the shovel tests revealed three soil strata in profile. In these shovel tests Stratum I, which extended to varying depths, but generally reached to between 30 to 40 cm (12 to 16 in) below surface, was described as a deposit of dark brown (10YR 3/3) sandy fill layer. Underlying Stratum I, Stratum II, a layer of yellowish brown (10YR 5/6) sand, generally terminated at 50 to 60 cm (20 to 24 in) below surface. Finally, Stratum III consisted of a deposit of grayish brown (10YR 5/2) coarse sand.

In addition, a number of severely disturbed shovel tests were noted as well. These shovel tests exhibited five strata in profile, with Stratum I reaching from 0 to 10 cm (0 to 4 in) below surface and represented by a layer of dark brown (10YR 3/3) loamy sand. Stratum II in the disturbed shovel tests consisted of a layer of mottled dark brown (10YR 3/3) sand and yellowish brown (10YR 5/4) sand that extended from 10 to 20 cm (4 to 8 in) below surface. This was underlain by Stratum III, a layer of grayish brown (10YR 5/2) coarse sand reaching to 50 cm (20 in) below surface. Stratum IV, which ranged in depth from 50 to 55 cm (20 to 22 in) below surface, was described as a deposit of mottled red (2.5YR 4/6) and brown (7.5YR 4/2) coarse sands. Finally, Stratum V, which reached to a maximum excavated depth of 60 cm (24 in) below surface consisted of a layer of gray (10YR 5/1) coarse sand. Shovel tests characterized by the above referenced stratigraphy were located throughout the testing area, indicating that no large areas of intact soils remain within Development Area E.

A single non-site cultural resources locus (Locus 2) was identified during the archeological inventory of Development Area E. This newly identified cultural resource was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]); it is discussed below. In addition, previous cultural resources investigations have suggested the presence of a Revolutionary War-era wigwam within the confines of Development Area E. A detailed description of this site can be found in Chapter IV of this document. Despite intensive shovel



testing throughout this project parcel, the current investigation, failed to recover cultural material that could be attributed to the Revolutionary War-era wigwam. Examination of the “archaeologically sensitive” areas associated with Development Area E did result in the identification of numerous examples of modern beer bottle glass, plastic items, cellophane wrappers, asphalt, and bottle caps. Their identification indicates the “archaeologically sensitive” areas of Development Area E have been subjected to significant impacts as a result of modern earth moving and fill deposition.

In addition, Figure 19 indicates, that this area is the site of a former large building complex that was constructed by the United States military at the opening of World War II. Construction of this facility involved large scale earth moving and the installation of electrical and plumbing infrastructure, some of which may still be represented by the concrete pads and metal plates noted within the “archaeologically sensitive” portions of Development Area E. Further, a review of Figure 33 indicates that this portion of the proposed project parcel once was composed of wetland areas that were drained through the installation of an east-west trending ditch. Thus, prior to the 1928 alterations and the installation of the World War II military facility, Development Area E was characterized by a wetland. Further, discussions with a local informant indicate that the “archaeologically sensitive” areas within Development Area E also have been impacted by the deposition of large amounts of fill that were dumped there during the construction of Rentschler Stadium.

Thus, the results of the historic research and the current fieldwork indicate that Locus 2 and Development Area E have been severely impacted throughout the historic and modern eras. As a result, Heritage Consultants, LLC assessed Locus 2 as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this non-site cultural resources locus or the Area of Potential Effect associated with Development Area E is recommended.

Locus 2

Phase IB cultural resources survey of the “archaeologically sensitive” areas associated with Development Area E resulted in the identification of a single non-site cultural resources locus designated as Locus 2 (Figure 36). Locus 2, which was described as ovoid in configuration, produced two plain whiteware sherds. These artifacts were recovered from Shovel Test 1 on Survey Transect 2 at a depth of 20 to 30 cm (8 to 12 in) below surface and from Shovel Test 4 on Survey Transect 5 at a depth of 20 to 30 cm (8 to 12 in) below surface. Careful examination of the stratigraphy of both shovel tests indicate that the two artifacts were recovered from fill deposits. Further, while the ceramic sherds contained no decorative elements, they can be dated from after ca. 1830, which indicates that they likely are not associated with the Revolutionary War-era wigwam site reported to exist within Development Area E by Archaeological and Historical Services, Inc. Despite an intensive field effort, no archeological evidence of the Revolutionary War-era wigwam site was identified within the confines of Area E.

Shovel testing conducted within the vicinity of Locus 2 failed to identify any evidence of intact cultural deposits within the currently proposed project area. The low artifact density and the absence of intact cultural deposits suggest that Locus 2 lacks research potential. This locus does not possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Locus 2 is recommended.

Results of Phase IB Survey of Development Area D

The “archaeologically sensitive” areas associated with Development Area D, which measure approximately 2.7 ac in size, are situated to the southwest of Rentschler Stadium, to the east of a Pratt & Whitney hangar complex, and to the north of a taxiway associated with Rentschler Field (Figure 2). At the time of survey, Development Area D consisted of an open, level

parcel of land covered with short grasses (Figure 5). In addition, as depicted in Figure 37, this area contained a roughly rectangular low-lying area saturated with standing water. This low-lying area also was surrounded with stakes and caution tape (Figure 38). As a result, it was not subjected to subsurface testing.

According to Archaeological and Historical Services, Inc., the “archaeologically sensitive” portions of Development Area D were deemed significant because they may have been located “...within the areas designated by Spiess as the location of a Podunk village” (Forrest et al. 2006:23). A review of archaeological site forms on file with the Connecticut State Historic Preservation Office indicated that two separate site forms (43-9 and 43-22) have been submitted for this Native American village (see Chapter V). The first, 43-9, places the site area in the vicinity of Runway 4/22 of Rentschler Field, while the second, 43-22, indicated that it was located adjacent to Willow Brook, which now is the site of a large Pratt & Whitney building complex. Finally, as reported by Archaeological and Historical Services, Inc., “Spiess provided little concrete information as to how this site is associated with the Podunks” (Forrest et al. 2006:24). Thus, taken together, these contextual data indicate that the actual location of the Native American village, like that of the wigwam location associated with Development Area E, could not be determined with great accuracy. The “Podunk village” likely existed in the area to the north/northwest of Development Area D, closer to Willow Brook, which has been severely impacted by Pratt & Whitney expansion. Nevertheless, the “archaeologically sensitive areas” associated with Development Area D were subjected to systematic shovel testing.

During survey of Development Area D, 39 of 40 planned (98 percent) planned shovel tests were excavated at 30 m (98.4 ft) intervals along eight survey transects spaced 30 m (98.4 ft) apart. The single planned but unexcavated shovel test fell within an area characterized by significant surficial disturbance related to the emplacement of a large concrete cylinder and associated electrical conduit. According to Pratt & Whitney employees, this landscape feature likely represents the remains of a former runway light pole.

Shovel tests excavated throughout the portions of Development Area D that were deemed as “archaeologically sensitive” by Archaeological and Historical Services, Inc., (Forrest et al. 2006) exhibited widely varying stratigraphy in terms of color, soil texture, and depth. The only commonality that they all shared was that they all contained disturbed soil deposits and significant amounts of fill. All of the shovel tests contained an uppermost strata characterized by dark brown (10YR 3/3) loamy sand that reached terminal depths ranging from 10 to 60 cm (4 to 24 in) below surface. Stratum II of the shovel tests ranged in color from yellowish brown (10YR 5/4) to black (10YR 2/1) to reddish brown (5YR 5/4) to mottled yellowish brown/reddish brown (10YR 5/4 / 5YR 5/4); this stratum reached to varying terminal depths of 40 to 80 cm (16 to 32 in) below surface. Finally, a large number of the shovel tests excavated in this area produced a basal soil stratum that was characterized by a deposit of mottled red (2.5 YR 4/6), brown (7.5YR 5/3), and yellowish brown (10YR 5/4) oxidized soils. This stratum represented formerly wet or inundated soils and its initial occurrence varied from as shallow as 50 cm (20 in) below surface in some place to as deeply as 70 cm (28 in) below surface in other places. A review of Figure 33 indicates that the majority of Development Area D consisted of wetlands as recent as the early twentieth century. These wetland areas were drained through the installation of an east-west trending ditch that extended toward the area that now contains the Pratt & Whitney hangar complex. Thus, it is clear that the modern condition of Development Areas D is substantially different to the historic condition of the area. Further, the large variation in soil texture, color, and depth noted during the Phase I cultural resources reconnaissance survey indicates that the “archaeologically sensitive” areas associated with Development Area D, as identified by Archaeological and Historical Services, Inc., represent disturbed deposits and significant amounts of fill used to cover former wetland locations.

Phase IB testing of the “archaeologically sensitive” areas associated with Development Area D resulted in the identification of a single disturbed non-site cultural resources locus designated as Locus 3. This locus was assessed



Figure 37. Plan view of the eastern portion of Area D depicting the perceived high probability zone and shovel test locations.



Figure 38. Overview photo of previously disturbed low lying area within Development Area D, facing north (note stakes around area and standing water).

as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]); it is described below. Detailed examination of Locus 3 and Development Area D revealed that the area has been subjected to severe impacts in the past as a result of building and road construction, installation of the nearby taxiway, diversion of Willow Brook, and substantial filling related to the construction of Rentschler Field. No additional testing of Locus 3 or Development Area D is recommended.

Locus 3

Locus 3, described as round in configuration, yielded a single undecorated whiteware sherd (Figure 37). This artifact was recovered from Stratum I of Shovel Test 5 on Survey Transect 8 at a depth of 20 to 30 cm (8 to 12 in) below surface. Stratum I of this shovel test consisted of a deposit of mottled dark brown (10YR 3/3) and very dark brown (10YR 2/2) loamy sand that reached from 0 to 50 cm (0 to 20 in) below surface. Careful examination of this soil stratum revealed that it represented

a fill deposit and that the whiteware sherd was an incidental inclusion in the soil matrix. No other historic or prehistoric artifacts were collected from the locus area, and no cultural material and/or cultural features that could be ascribed to the above-referenced Podunk village site were identified.

The absence of intact subsurface cultural deposits, and the limited artifact assemblage suggests that this non-site cultural resources locus lacks research potential. Locus 3 does not possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Locus 3 is recommended.

Results of Phase IB Survey of Development Area C1-West

In order to simplify the survey process, Area C1 was divided into two testing zones. These were designated as Areas C1-West and C1-East, and together totaled 18.4 ac in extent. Area C1-West is located to the west of Runway A of Rentschler Field, while Area C1-East is situated between Runway A to the west and Runway B to

the east (Figure 2). At the time of survey, Area C1-West consisted of an open, level area characterized by short grasses (Figure 6). Completion of the Phase IB cultural resources reconnaissance survey of this area was accomplished through the successful excavation of 35 of 36 (97 percent) planned shovel tests along seven survey transects spaced at 30 m (98.4 ft) intervals (Figure 39). These shovel tests were excavated at 30 m (98.4 ft) intervals along the survey transects. The single planned but unexcavated shovel tests fell within a fenced and paved area in the northwestern portion of the testing area.

Shovel tests excavated throughout Area C1-West exhibited stratigraphy that varied widely in color, soil texture, and depth. In general, the excavated shovel tests exhibited three soil strata in profile. Stratum I of the shovel tests located in the northern portion of Area C-1 West consisted of a layer of dark brown (10YR 3/3) loamy sand that reached terminal depths ranging from 20 to 30 cm (8 to 12 in) below surface; this layer represented recent filling and grading of the airfield. Stratum II, which was characterized as a deposit of yellowish brown and/or mottled yellowish brown (10YR 5/4) sand also varied in depth, ranging from between 20 to 60 cm (8 to 24 in) below surface. Finally, Stratum III consisted of a layer of grayish brown (10YR 5/2) coarse sand with oxidized mottling; this stratum generally reached from 50 to 80 cm (20 to 32 in) below surface, and it represented former wetland soils. The profiles of these shovel tests was similar to shovel tests excavated within Development Area D. A review of Figure 33 reveals that these shovel tests exhibit similar stratigraphic profiles because they too are located in an area that was once characterized by wetlands.

In addition, some of the shovel tests excavated within Area C1-West exhibited more than three soil strata, indicating that significant amounts of disturbance and filling have taken place in this area of Rentschler Field. In these shovel tests, Stratum I was represented by a layer of dark brown (10YR 3/3) loamy sand that reached from 0 to 20 cm (0 to 8 in) below surface. Stratum II in these shovel tests consisted of a deposit of mottled dark brown (10YR 3/3) loamy sand and yellowish brown (10YR 5/4) sand; it ranged in depth from between 20 to 35

cm (10 to 14 in) below surface. Stratum III was described as a layer of dark brown (10YR 5/2) and very dark brown (10YR 2/2) compact sand that extended to a depth of 45 cm (18 in) below surface. Stratum IV, a deposit of mottled light gray (10YR 7/1) and black (10YR 2/1) coarse sand, extended from 45 to 55 cm (14 to 22 in) below surface. Underlying Stratum IV, Stratum V ranged in depth from 55 to 60 cm (22 to 24 in) and it was described as a layer of dark brown (10YR 3/3) coarse sand. Finally, Stratum VI was excavated to a terminal depth of 80 cm (32 in) below surface and was noted as a deposit of light brown (7.5YR 6/3) coarse sand. These shovel tests profiles represent past disturbances related to large-scale earth moving associated with the construction, use, and maintenance of Rentschler Field.

Despite this intensive field effort no cultural material and/or evidence of intact cultural deposits were identified within the confines of Area C1-West. As the historical research presented in Chapter IV and the fieldwork indicates, Area C-1 West has undergone substantial alterations related to wetlands draining, plowing and cultivation of tobacco, and the construction and reconfiguration of Rentschler Airfield. Because this area has been severely impacted and no longer retains depositional integrity, no additional testing of this area is recommended.

Results of Phase IB Survey of Development Area C1-East

As mentioned above, Area C1-East is situated to the east of Runway A and to the west of Runway B (Figure 2). At the time of survey, this large open area was characterized by a combination of open grassy areas and a strip of tall weeds and small trees that constitute a bird sanctuary (Figure 7). The bird sanctuary runs parallel to the southern boundary of Area C1-East and it extends approximately 60 m (200 ft) to the north. During survey, a total of 55 of 57 (97 percent) planned shovel tests were excavated throughout the testing area associated with Area C1-East (Figure 40). The two planned but unexcavated shovel tests were not completed because it was determined, after the survey was initiated, that they fell within the confines of the bird sanctuary. This area was abandoned so as



Figure 39. Plan view of the western portion of Area C1 depicting the perceived high probability zone and shovel test locations.

not to disturb nesting birds or their habitat. The above-referenced shovel tests were excavated at 30 m (98.4 ft) intervals along survey transects spaced 30 m (98.4 ft) apart.

Shovel tests excavated throughout Area C1-East exhibited varying stratigraphy with differences in color, texture, and depth across the survey area. The majority of the shovel tests exhibited three soil strata in profile. Strata I consisted of a layer of dark brown (10YR 3/3) sandy loam that reached terminal depths ranging from 20 to 30 cm (8 to 12 in) below surface. Stratum II, which was characterized as a deposit of yellowish brown (10YR 5/4) or mottled dark yellowish brown (10YR 4/4) sand also varied in depth, ranging from between 20 to 40 cm (8 to 16 in) below surface in some in places and from 30 to 60 cm (12 to 24 in) in other places. The third stratum consisted of a layer of gray (10YR 5/1) coarse sand that was excavated to a maximum depth of 80 cm (32 in) below surface.

In addition, some of the shovel tests excavated within Area C1-East revealed four soil strata, with Stratum I represented by a dark brown (10YR 3/3) loamy sand that reached from 0 to 25 cm (0 to 10 in) below surface. Stratum II in these shovel tests consisted of a deposit of mottled dark brown (10YR 3/3) loamy sand and yellowish brown (10YR 5/4) sand; it ranged in depth from between 25 to 35 cm (10 to 14 in) below surface. Stratum III was described as a layer of mottled brown (10YR 4/3) and very dark brown (10YR 2/2) compact sand that extended to a depth of 40 cm (16 in) below surface. Finally, Stratum IV consisted of a deposit of mottled yellowish brown (10YR 5/4) and brown (10YR 5/3) coarse sand with red (2.5YR 4/6) oxidized patches. These represent past disturbances related to the earth moving, fill deposition, and the construction of Rentschler Field throughout the project parcel.

Phase IB cultural resources survey of Area C1-East resulted in the identification of a single non-site cultural resources locus designated as Locus 4. This newly identified cultural resources locus is discussed below. It was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Locus 4 or Development Area C1-East is recommended.

Locus 4

Locus 4, which was described as ovoid in configuration, produced a total of 15 historic period artifacts from five survey shovel tests and two delineation shovel tests (Figures 7 and 40). The recovered cultural material was collected from Stratum I, a disturbed fill layer of recent origin, and Stratum II, a layer of mottled yellowish brown (10YR 5/4) sand likely representing soils modified as a result of airfield construction.

Cultural material collected from Stratum I of Locus 4 consisted of 3 plain whiteware sherds, a single brick fragment, and 1 clear machine made bottle glass rim shard. While the whiteware sherds date from post 1830, the machine made bottle glass shard dates from after the turn of the twentieth century. Artifacts collected from Stratum II of Locus 4 consisted of 4 shards of clear flat glass, 1 unidentifiable nail shank, 1 piece of brick, 3 clear bottle glass shards, and a single clear machine made bottle glass rim shard. The only temporally diagnostic artifact recovered from Stratum II, the machine made bottle glass rim shard, also dates from after the turn of the twentieth century.

In addition, to the recovered cultural material, Phase IB survey and delineation shovel testing of Area C1-East resulted in the identification of a small deposit of iron slag in Shovel Test 4 on Survey Transect 12, as well as a grouping of mortared bricks in Shovel Test 1 on Survey Transect 12. Unfortunately, the slag deposit did not produce any temporally diagnostic artifacts, so it could not be dated or associated clearly with any of the other cultural material recovered from the Locus 4 area. Further, the bricks, which consisted of a run of three bricks in length, two bricks in width, and four bricks in thickness were identified in Stratum III beneath 3 pieces of temporally non-diagnostic bottle glass and a single brick fragment recovered from Stratum II. Thus, while the bricks likely represent an architectural feature, no associated cultural material was found that could provide a firm date for their use. Further, Phase IB testing in the area was discontinued because the brick concentration was located within the protected bird sanctuary. Although no definitive data regarding the origin or exact function of the

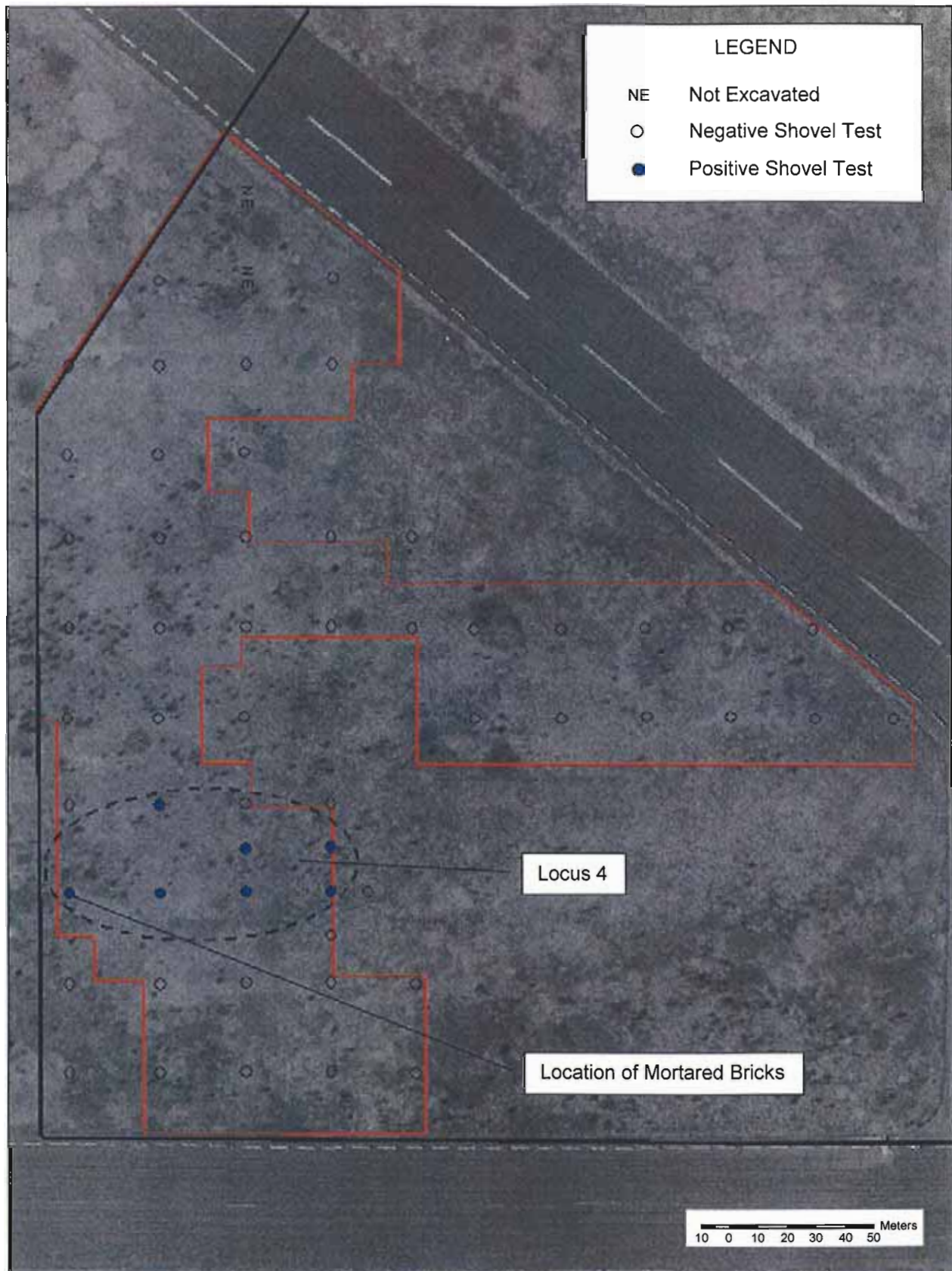


Figure 40. Plan view of the eastern portion of Area C1 depicting the perceived high probability zone and shovel test locations.

bricks was collected, archaeological data and early photographs of the area (ca. 1930 to 1934) suggest that the identified brick concentration appears to be related to a tobacco barn or other agriculturally associated building. (Figure 14). As such its historical significance is limited, as numerous, better preserved examples of these types of sites are ubiquitous in the region.

Phase I cultural resources survey of the Locus 4 area revealed that it has been subjected to impacts in the past as a result of earth moving and filling related to the construction, maintenance, and use of Rentschler Field, as well as former tobacco cultivation. The sparse artifact assemblage, the lack of intact cultural deposits, and the absence of research potential demonstrate that Locus 4 does not possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this non-site cultural resources locus is recommended.

Summary of Phase I Cultural Resources Reconnaissance Survey Results

Completion of historic research and fieldwork associated with the current Phase I cultural resources reconnaissance survey revealed that the proposed project area has been severely impacted as a result of historic period use and development. The research associated with this undertaking also revealed that much of the Area of Potential Effect contained wetland areas that had to be drained before they could be converted to productive farmland that was used to grow tobacco. Thus, it is now known that the

list of impacts to the proposed project parcel includes, but may not necessarily be limited to, the excavation of ditches to provide drainage; long-term plowing for tobacco cultivation; cutting, filling, and grading associated with the construction of Rentschler Airfield; installation of electrical facilities and drainage culverts associated with the extant airfield; demolition of houses along Silver Lane; construction and demolition of a World War II era military facility; and recent soil deposition associated with the construction of Rentschler Stadium. All of these processes have adversely affected the proposed project area to the point that significant intact archaeological deposits are highly unlikely in the area, and in fact, none were identified during survey. Further, these impacts are on such a scale that they would have destroyed any cultural deposits related to the former Podunk village and/or the Revolutionary War period wigwam, had either been located within the examined Areas of Potential Effect.

Despite the fact that the proposed project area retains no archaeological potential or evidence of intact archaeological resources, Rentschler Field is an important part of aviation history in the United States. As Chapter VIII of this document indicates, the creation and use of Rentschler Field can be considered a significant cultural resource. Therefore, it is the professional opinion of Heritage Consultants, LLC that an appropriate method(s) of mitigating the impacts to this important cultural resource should be considered. Mitigation alternatives for this important historic cultural resource are presented in the next chapter.

CHAPTER VIII

SUMMARY AND MANAGEMENT RECOMMENDATIONS

The Phase I cultural resources reconnaissance survey of the currently proposed Cabela's development project within Rentschler Field in East Hartford, Connecticut revealed evidence of prior, substantial ground disturbing activities within the Area of Potential Effect. The majority of shovel tests excavated within the confines of the previously identified "archaeologically sensitive" areas exhibited soil profiles consistent with extensive modification of the landscape (drainage ditches, fill, airfield construction, building construction and demolition, and long term farming practices, among others). Further, examination of the "archaeologically sensitive" areas resulted in the identification of four non-site cultural resources loci (Locus 1 through Locus 4) characterized by disturbed soil contexts, small artifact assemblages, and a lack of research of potential characterized each of these non-site cultural resources loci. Due to their disturbed nature and/or lack of research potential, Locus 1 through Locus 4 were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing or recordation of these four non-site cultural resources loci is recommended.

Despite the fact that the proposed project area retains no archaeological potential or evidence of intact archaeological resources, Heritage Consultants, LLC documented the important historical nature and context of Rentschler Field during the current investigation. The airfield, built by the Pratt & Whitney Company and opened in 1931, was named after Frederick Brant Rentschler, who founded both the aircraft

division of Pratt and Whitney and its current parent company United Technologies. The field originally was used for test flights and maintenance operations, and later for corporate aviation. Because this field is an important part of aviation history, it also must be evaluated with respect to the currently proposed development. As part of the background and historical research conducted as part of the current investigation, Heritage Consultants, LLC has identified the following historic facts and themes regarding the airfield and its world-renowned namesake, Frederick Rentschler:

- Frederick Rentschler helped form the Wright Aeronautical Corporation in 1909, and as president spearheaded the development of the "Whirlwind," America's first high-powered, air-cooled radial aircraft engine, which was used in record-setting flights in the 1920s and 1930s. Charles Lindbergh gained international fame by flying his Whirlwind-powered Spirit of St. Louis on an epic solo flight across the Atlantic, underscoring the importance of the air-cooled engine as one of the most significant developments in aviation history.
- In 1925, Frederick Rentschler helped establish the Pratt & Whitney Aircraft Company, with its primary mission to develop and

perfect the high horsepower “Wasp” radial engine for military, commercial, and private aircraft;

- By 1929, Frederick Rentschler’s “Wasp” and subsequent engine, the “Hornet,” both tested and perfected at Rentschler Field, were powering the nation’s first airliners. Their use in the aircraft of the growing Navy and Army air services was credited with being a prime factor in bringing the nation’s military aviation to a position of world leadership;
- In 1929, Rentschler and Boeing established a new holding company called the United Aircraft and Transport Corporation, which effectively began commercial aviation;
- The dedication of Rentschler Field and the United States Army Exercises of May 24, 25, and 26, in 1931 as attended by visitors and guests of honor Herbert Hoover, William Boeing, Charles Lindbergh, Amelia Earhart, and many other famous personalities;
- During World War II, approximately 50 percent of the airplane engines used by the United States military were built by Pratt & Whitney Aircraft and its licensees. This provided air power to the U.S. military for the allied victory over the Axis powers;
- Frederick Rentschler appeared on the May 28, 1951 cover of Time Magazine; the related article described Mr. Rentschler as overseeing test flights of B-50 bombers at the Pratt and Whitney Company airfield;

- In 1951, Frederick Rentschler was declared an Officer of the Legion of Honor “for his contribution to the progress of aeronautical science;”
- In 1956, Frederick Rentschler was the recipient of the Daniel Guggenheim Medal for “notable achievements to the advancement of aeronautics;”
- In 1958, the United States Air Force presented Mr. Rentschler with the Civilian Service Award for Exceptional Service as a pioneer in the development, research and manufacture of aircraft engines;
- Frederick Rentschler was inducted into the United States Air Force Aviation Hall of Fame in 1982, and he was designated by Harvard University as one of the top twentieth century business leaders.

As demonstrated above, Mr. Rentschler and the airfield named after him have made significant contributions to aviation history in our country. His now famous airplane engines and engineering principles were developed and tested at Pratt and Whitney, specifically within the currently proposed project area. Frederick Rentschler’s vision as it related to aviation developments also had major impacts on the region’s economy by creating thousands of jobs for individuals who had few employment opportunities coming out of the Great Depression, as well as specifically for women during World War II. Based on this historical research, it is clear that Rentschler Field, as an historic resource, retains the qualities of significance as defined by criteria A and B of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

According to the Advisory Council on Historic Preservation, “in applying the National Register of Historic Places criteria for evaluation, the quality of significance in

American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past.

Further, Ms. Carol D. Shull, the Keeper of the National Register of Historic Places, wrote in the document entitled *Guidelines for Evaluating and Documenting Historic Aviation Properties* “the Nation’s remarkable aviation history is reflected in numerous districts, sites, buildings, structures, and objects eligible for the National Register of Historic Places. These historic aircraft, airfields, research and testing facilities, aeronautical and engineering research laboratories, production plants, military installations, and launch sites are worthy of preservation for their contributions to aviation technology, and for their association with the historically significant people and events that made the United States the world’s leader in aviation.” This *Guidelines for Evaluating and Documenting Historic Aviation Properties* specifically discusses Mr. Rentschler and Pratt and Whitney Aircraft as a notable part of

aviation in American History. Locally, Herbert F. Janick (Connecticut Heritage Gateway Website Contributor), noted that “despite the importance of the industry to the state there is little written on the subject of aviation in Connecticut beyond the outdated public relations-style history of Pratt & Whitney: *The Pratt and Whitney Aircraft Story* (East Hartford, Connecticut, 1950).”

The currently proposed development of Rentschler Field is an important part of the economic history of East Hartford that Pratt & Whitney Aircraft, under the leadership of Frederick Rentschler, helped create. Therefore, it is the professional opinion of Heritage Consultants, LLC that an appropriate method(s) of mitigating the impacts to this important cultural resource should be considered. The proposed development of this airfield presents the opportunity to commemorate the contributions that Pratt & Whitney and Frederick Rentschler have made to the city of East Hartford, the State of Connecticut, and our Nation. Thus, appropriate mitigation strategies include, but may not necessarily be limited to, the production of a public history booklet about Mr. Rentschler and the growth of the Aviation Industry, as well as creation of an informative kiosk within Cabela’s that combines the developer’s spirit of exploration with the past use of the project parcel. These two mitigative strategies, as well as any others that are appropriate, should be considered in consultation with the Connecticut State Historic Preservation Office.

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- 1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist*, 23(1):4-31.

Wood, F.J.

- 1919 *The Turnpikes of New England*. Pepperell, Massachusetts: Branch Line Press.

Woodford, E.M.

- 1855 *Smith's Map of Hartford County, Connecticut, From Actual Surveys*. Philadelphia: H. & C.T. Smith.

APPENDIX I

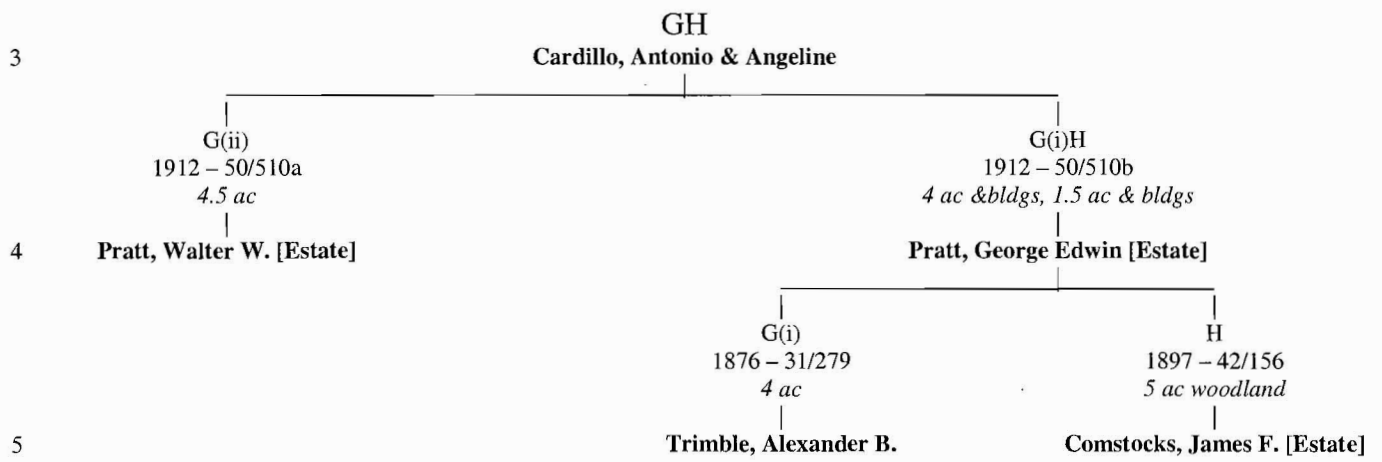
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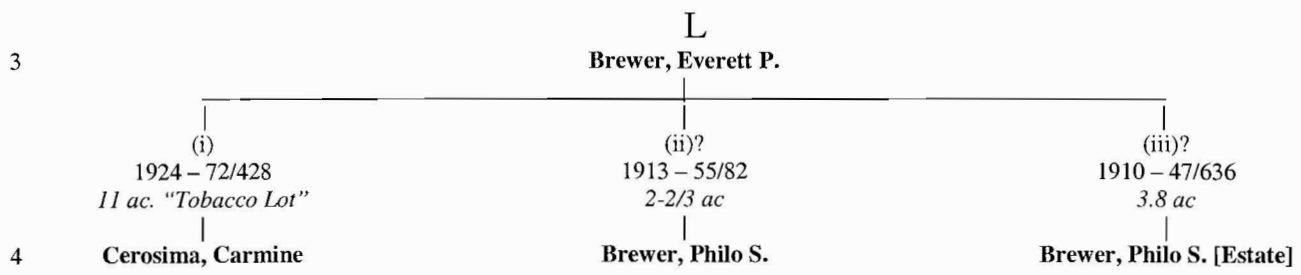
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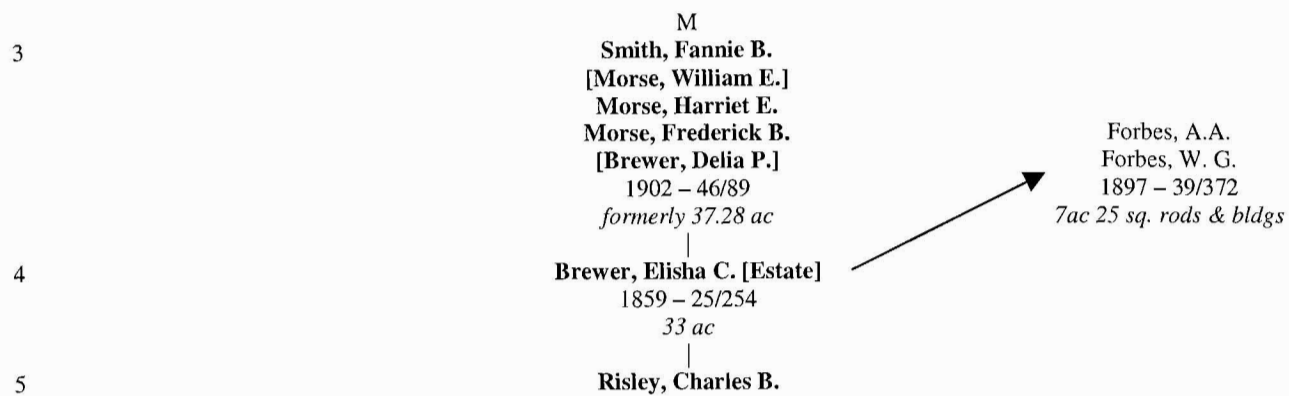
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American Sumatra Tobacco Corporation

1926 - 86/1

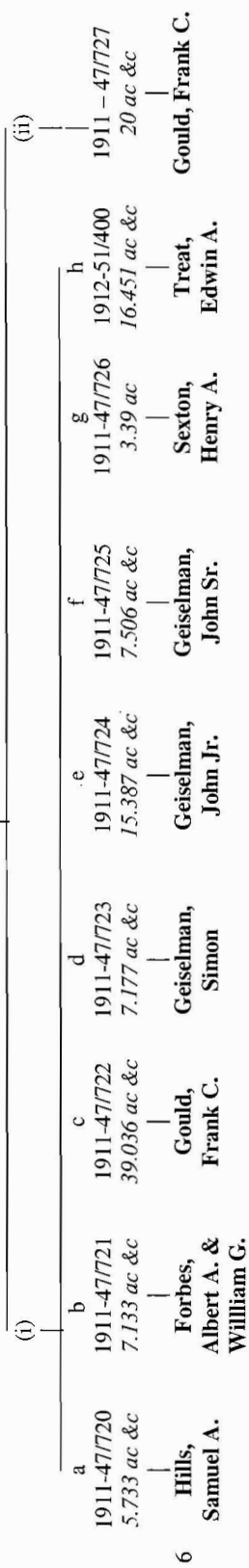
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American Sumatra Tobacco Company

1918 - 58/364

(i) 102.155 ac (ii) 20 ac

The Connecticut Tobacco Corporation



APPENDIX II

RESUMES OF KEY PERSONNEL



CATHERINE LABADIA, M.A.
PRESIDENT & PRINCIPAL INVESTIGATOR

EDUCATION

Bachelor of Arts in Anthropology with specialization in archeology, Central Connecticut State University, New Britain, Connecticut, 1991

Master of Arts in Anthropology with specialization in archeology, University of Connecticut, Storrs, Connecticut, 1996

Ph.D. Candidate, Department of Anthropology, Pennsylvania State University, University Park, Pennsylvania

Introduction to Federal Projects and Historic Preservation Law, Section 106 Compliance Course, 2001

NEPA and the Transportation Decision Making Process, 2003

Federal Energy Regulatory Commission, Environmental Report Preparation Seminar, 2003

HONORS AND AWARDS

Town of Windsor, Connecticut - Research Support, 1998

Sigma Xi, Grant in Aid of Research, 1998

University of Connecticut Anthropology Department Pre-Doctoral Fellowship, 1995

Central Connecticut State University Anthropology Departmental Honors Award, 1991

State of Connecticut Academic Scholarship, 1988-1991

PROFESSIONAL EXPERIENCE

Principal Investigator, Heritage Consultants, LLC, February 2004 - Present.

Project Manager, R. Christopher Goodwin & Associates, Inc., New Orleans, Louisiana, November 1999-2004

Research Assistant, R. Christopher Goodwin & Associates, Inc., New Orleans, Louisiana, April-November 1999

Principal Investigator/Field Supervisor, Town of Windsor, Connecticut, May-July 1998

Principal Investigator/Field Supervisor, Town of Lynne, Connecticut, July-September 1998

Staff, Matson Museum of Anthropology, University Park, Pennsylvania, 1997-1998

Teaching Assistant, Pennsylvania State University, Department of Anthropology, 1996-1998

Undergraduate Laboratory Supervisor, Pennsylvania State University, Department of Anthropology, Fall 1997 and Fall 1996

Teaching Assistant, University of Connecticut, Department of Anthropology, 1994-1996

Crew Chief, Connecticut Office of the State Archaeologist, 1996

Lab Assistant, Mashantucket Pequot Museum Conservation Lab, Ledyard, Connecticut, 1993-1996

Field Technician/Lab Technician, Public Archaeology Survey Team, Inc., 1993-1996

Research Assistant, University of Connecticut, Department of Anthropology, Spring 1995

PROFESSIONAL MEMBERSHIPS

Society for American Archaeology

TRAINING AND SPECIAL SKILLS

Environmental Impact Statement/Environmental Assessment Report Preparation

Alternatives Analysis/Corridor Selection Studies

Existing Conditions/Disturbance Investigations

SHPO/Native American Consultation

Geologic Thin-sectioning

Computer Skills: Systat, Minitab, Surfer, Paradox, Corel Office, Microsoft Office, Adobe Photoshop, and DOS-based and Unix-based operations

GIS Skills: ArcInfo, ArcView, ArcGIS, MapInfo, Idrisi, AutoCad, digitizing, and GPS units

Photography

Transit Operation

Non-computer Aided Drafting

Lab Skills: Artifact stabilization and conservation

World Wide Web design and authoring

GRAPHICS PUBLISHED

1998 AutoCad images of the Read Shell Mound contours, burials, and artifacts (Figures 4 and 5). In G. Milner and R. Jeffries' Read Archaic Shell Mound in Kentucky. *Southeastern Archeology*.

1998 AutoCad images of Cahokia. In G. Milner's *The Cahokia Chiefdom: The Archeology of a Mississippian Society*. Smithsonian Series in Archeological Inquiry.

A SAMPLE OF MANUSCRIPTS, TECHNICAL REPORTS, AND PAPERS PRESENTED

1997a *The Read Shell Midden: Site Formation and Structure*. Paper presented at the Southeastern Archeological Conference, Baton Rouge, Louisiana (with G. Milner and R. Jeffries).

1997b *The Mississippian Period Population of Cahokia and the American Bottom*. Delivered at the join symposium of the Ontario Archeological Society and the Midwest Archaeological Conference, North York, Ontario.

- 1998 *Migration and the Maintenance of Cultural Integrity: The Linearbandkeramik as a Case Study*. Delivered at the 63rd annual meeting of the Society for American Archeology, Seattle, Washington.
- 1999a *Formulating and Testing Archaeological Predictive Models using a Geographic Information System*. Delivered at the 64th annual meeting of the Society for American Archaeology, Chicago Illinois.
- 1999b *Phase I Cultural Resources Survey of SR 30 (US 98) Retention Ponds 3 and 4; State Project No.: 48280-3510, Escambia County, Florida* (with Randy Lichtenberger, Ralph Draughon, Angele Montana, William P. Athens and Letisha Leucking). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 1999c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed SR 30 (US 98) Thomas Drive Intersection Project; State Project No.: 46010-1537, Bay County, Florida* (with Randy Lichtenberger, Susan Barrett Smith and William P. Athens). Submitted by R. Christopher Goodwin & Associates & Inc. to the Florida Department of Transportation, District III.
- 1999d *Phase I Cultural Resources Survey and Archeological Inventory of Five Proposed Retention Ponds Adjacent to SR77 (with Cove Boulevard/Martin Luther King Boulevard), Bay County, Florida* (with Randy Lichtenberger, Susan Barrett Smith, Charlene Keck and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 1999e *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed US 90 (SR 10) Weigh Station Project, Escambia County, Florida* (with Randy Lichtenberger, Susan Barrett Smith, Charlene Keck and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 1999f *Cultural Resources Background Research and Sample Survey of Areas West of Morgan City, Louisiana as Part of the Lower Atchafalaya Basin Reevaluation Study* (with Randy Lichtenberger and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc to the U.S. Army Corps of Engineers, New Orleans District.
- 1999g *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Gulfstream Natural Gas System L.L.C. 36 Inch O.D. Project in Mobile County, Alabama* (with William P. Athens, David George, Jeremy Pincoske, Ralph B. Draughon, Jr., and Dave D. Davis). Submitted by R. Christopher Goodwin & Associates, Inc. to ANR Pipeline Company, Inc.
- 1999h *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Country Drive Expansion Project Area, Terrebonne Parish, Louisiana* (with Kari Krause and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to T. Baker Smith & Son, Inc.

- 1999i *Cultural Resources Survey and Inventory, Florida Gas Transmission Phase V Expansion, Gulf Power Lateral, Palmetto Power Lateral, Loop C, Loop D, Loop E, Loop G, Loop H St. Petersburg Lateral, Loop I St. Petersburg Lateral, Jacksonville Loop, and FP&L Lateral* (with David George, Jeremy Pincoske, Susan Barrett Smith, Ralph B. Draughon, Jr., Charlene Keck, Colleen Hanratty, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission.
- 2000a *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Country Drive Expansion Project Area, Terrebonne Parish, Louisiana* (with Kari Krause and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to T. Baker Smith and Son, Inc.
- 2000b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed SR 30 (US 98) Expansions Corridor from Mack Bayou Road to CR 83 (US 331), Walton County, Florida* (with Susan Barrett Smith, Ralph B. Draughon, Jr., Jeremy Pincoske, James Hollingsworth, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 2000c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed SR 30 (US 98) Expansion Corridor from CR 83 (US 331) to Peach Creek, Walton County, Florida* (with Susan Barrett Smith, Ralph B. Draughon, Jr., Jeremy Pincoske, James Hollingsworth, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 2000f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 71 (Greenwood Highway) Expansion Corridor from State Road 10 (US 90) to North of the City Limits of Greenwood, in Jackson County, Florida* (with Katy Coyle, David George, James Hollingsworth, Kari Krause, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 2000g *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Schooner Bayou Project Corridor in Vermilion Parish, Louisiana* (with Kari Krause, Jeremy Pincoske, Colleen Hanratty, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2000h *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Quincy Bypass, i.e., the Corridor Designed to Connect US 90 (State Road 10) and State Road 12, Gadsden County, Florida* (with Matthew Keelean, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens).
- 2000i *Phase I Cultural Resources Survey and Archeological Inventory of Two Pipeline Loops (Loop J and Loop K) and 10 Ancillary Use Facilities Associated with the Proposed Florida Gas Transmission Phase V Expansion, FGT Mobile Bay Lateral, Loop A, and Loop B, Gilchrist and Levy Counties, Florida* (with David George, Susan Barrett Smith, David Roth, Kristin Vanwert, James Eberwine, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.

- 2000j *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 269 Bridge Replacement Corridor, Walker County, Alabama* (with Katy Coyle, Jeremy Pincoske, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.
- 2000k *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 119 Bridge Replacement Corridor, Shelby County, Alabama* (with Katy Coyle, Jeremy Pincoske, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.
- 2000l *Phase I Cultural Resources Inventory of the Proposed Cypress Natural Gas Company, L.L.C., Cypress Pipeline Project, Nassau, Duval, and Clay Counties, Florida* (with Susan Barrett Smith, Katy Coyle, Jeremy Pincoske, Jon VandenBosch, Paul Heinrich, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Cypress Natural Gas Company, L.L.C.
- 2000m *Phase I Cultural Resources Survey And Archeological Inventory Of The Proposed 7.56 KM (4.7 MI) 36 Inch O.D. Gulfstream Pipeline Project Corridor, Mobile County, Alabama* (with William P. Athens, David George, Ralph Draughon, Jr., Jeremy Pincoske, Dave D. Davis). Submitted by R. Christopher Goodwin & Associates, Inc. to Gulfstream Natural Gas System, L.L.C.
- 2000n *Phase II National Register Testing and Evaluation of Site 8BF145, Bradford County, Florida* (with William P. Athens, Jeremy Pincoske, Ellen Wilmer, and Darryl Byrd). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.
- 2000o *Phase II National Register Testing and Evaluation of Site 8CO105, Columbia County, Florida* (with William P. Athens, Jeremy Pincoske, Ellen Wilmer, and Darryl Byrd). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.
- 2001a *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Mississippi River Gulf Outlet Dredged Material FY 98 Disposal Areas, St. Bernard Parish, Louisiana* (with Katy Coyle, Paul Heinrich, Jeremy Pincoske, James Eberwine, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2001b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 30 (U.S. 98) and State Road 368 (23rd Street) Intersection Expansion, Bay County, Florida* (with Susan Barrett Smith, Jeremy Pincoske, James Eberwine, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation.
- 2001c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 119 Bridge Replacement Corridor, Shelby County, Alabama* (with Katy Coyle and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.

- 2001d *Phase I Cultural Resources Survey and Archeological Inventory of the Soda Lake Mitigation Area, Red River Waterway, Mississippi to Shreveport in Caddo Parish, Louisiana* (with Paul Heinrich, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, Vicksburg District.
- 2001e *Phase I Cultural Resources Survey and Archeological Inventory Conducted at the Proposed Aiken Meter Station Facility Expansion, Aiken, South Carolina* (with Kari Krause and David R. George). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2001f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company North System Expansion II Pipeline Project in Harris, Talbot, Monroe, Bib, Jones, Baldwin, Washington, Jefferson, and Richmond Counties, Georgia* (with Kari Krause, Meg Thornton, Katy Coyle, Jeremy Pincoske, Jon VandenBosch, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2001g *South System Expansion II Pipeline Project, in Autauga, Elmore, Hale, Lee, Marengo, Perry, Sumter, and Tallapoosa Counties, Alabama* (with Kari Krause, Susan Barrett Smith, Jeremy Pincoske, Jon VandenBosch, Sean Coughlin, Elizabeth Stoffers, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2002a *Phase I Cultural Resources Survey and Archeological Inventory of the Alabama Portion of the Proposed Colonial Pipeline Project Corridor, Talladega, Calhoun, St. Clair, Blount, Cullman, Marshall, Morgan, Madison, and Limestone Counties, Alabama* (with David R. George, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, Kari Krause, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Colonial Pipeline Company.
- 2002b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Liquefied Natural Gas (SLNG) Elba Island Expansion Project in Chatham County, Georgia* (with William P. Athens, Kari Krause, Sean Coughlin, Alicia Ventresca, David George, Katy Coyle, Andrew Ivester, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy Corporation.
- 2002c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Liquefied Natural Gas Wetland Creation Project on Elba Island, Chatham County, Georgia* (with William P. Athens, Kari Krause, Sean Coughlin, Alicia Ventresca, Andrew Ivester, Katy Coyle, Jeremy Pincoske, and David George). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy Corporation.
- 2002d *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 79 Expansion Project Through Portions of Washington and Holmes Counties, Florida* (with William P. Athens, Rebecca Sick, Katy Coyle, Jeremy Pincoske, and David R. George). Submitted by R. Christopher Goodwin & Associates, Inc. to FDOT, District III.

- 2002e *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company South System Expansion II Pipeline, Sumter, Marengo, Hale, Perry, Autauga, Elmore, Tallapoosa, and Lee Counties, Alabama* (with William P. Athens, Kari Krause, Jeremy Pincoske, Susan Barrett Smith, Jon VandenBosch, Sean Coughlin, and Elizabeth Stoffers). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2002f *Phase I Cultural Resources Survey and Archeological Inventory of the Soda Lake Mitigation Area, Red River Waterway, Mississippi River to Shreveport In Caddo Parish, Louisiana* (with William P. Athens, Paul Heinrich, Jeremy Pincoske, and Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, Vicksburg District.
- 2002g *Phase II National Register Testing and Evaluation of Sites 1LE293, 1LE294, 1EE505, and 1TP54 in Lee, Elmore, and Tallapoosa Counties, Alabama* (with William P. Athens, Kari Krause, Katy Coyle, Jeremy Pincoske, Rebecca Sick, and James Eberwine). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2002h *Phase I Cultural Resources Survey and Archeological Inventory of Proposed ANR Pipeline Company, Wisconsin WestLeg Project, Walworth and Rock Counties, Wisconsin* (with William P. Athens, Kari Krause, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, and Sean Coughlin). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Corporation.
- 2002i *Phase I Cultural Resources Survey and Archeological Inventory of Proposed ANR Pipeline Company, Wisconsin WestLeg Project, McHenry County, Illinois* (with William P. Athens, Kari Krause, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, and Sean Coughlin). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Corporation.
- 2002j *Phase II National Register Testing and Evaluation of Sites 22LW616, 22LW617, 22LW618, 22LW619, 22LW620, 22LW621, and 22LW622, Lawrence County, Mississippi* (with William P. Athens, Kari Krause, Rebecca Sick, David George, Katy Coyle, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to MDOT.
- 2002k *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Vermilion River Dredge Disposal Project Area, Lafayette Parish, Louisiana* (with William P. Athens, Susan Barrett Smith, Alicia Ventresca, Eric Vogelheim, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.
- 2002l *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company South System Expansion II Pipeline Project in Harris, Talbot, Monroe, Bibb, Jones, Baldwin, Washington, Jefferson, and Richmond Counties, Georgia* (with William P. Athens, Jon VandenBosch, Kari Krause, Katy Coyle, Jeremy Pincoske, and Daya Naef). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

- 2003a *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project Corridor and its Associated Access Roads and Ancillary Facilities, Palm Beach and Martin Counties, Florida* (with William P. Athens, David George, Katy Coyle, Eric Vogelheim, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.
- 2003b *Phase II National Register Testing and Evaluation of Sites 16CA114 and 16CA115, Caldwell Parish, Louisiana* (with William P. Athens, David George, James Eberwine, Andrea White, and Heather Backo). Submitted by R. Christopher Goodwin & Associates, Inc. to Denmon Engineering, Inc.
- 2003c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Vermilion River Dredge Disposal Project Area, Lafayette, Parish, Louisiana* (with William P. Athens, Susan Barrett Smith, Alicia Ventresca, Eric Vogelheim, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.
- 2003d *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida* (with William P. Athens, David R. George, Katy Coyle, Eric Vogelheim, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.
- 2003e *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida* (with William P. Athens, David R. George, Eric Vogelheim, Katy Coyle, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.
- 2003f *Phase I Cultural Resources Survey and Archeological Inventory of a Proposed 1.12 ha (2.78 ac) Borrow Pit and an Associated Access Road, Ascension Parish, Louisiana* (with David George, Marie Pokrant, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.
- 2003g *Phase I Cultural Resources Survey and Archeological Inventory of the Chaland Headland Restoration Project, Plaquemines Parish, Louisiana* (with William P. Athens, David George, and Rebecca Sick). Submitted by R. Christopher Goodwin & Associates, Inc. to Tetra Tech EM, Inc.
- 2003h *Phase IB Cultural Resources Survey and Archeological Inventory of a 16.2 ha (40 ac) Project Parcel Rocky Hill, Connecticut* (with Catherine Labadia and Andrea White). Submitted by R. Christopher Goodwin & Associates, Inc., to Vanasse Hangen Brustlin, Inc.
- 2004a *Phase IA Cultural Resources Records Review and Literature Research of the Paul J. Rainey Wildlife Sanctuary, Vermilion Parish, Louisiana* (with William P. Athens, David George, and Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to Tetra Tech EM, Inc.

- 2004b *Phase I Cultural Resources Survey and Archeological Inventory of a Proposed Project Parcel in Rocky Hill, Connecticut* (with Catherine Labadia, Andrea White, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Vanasse Hangen Brustlin, Inc.
- 2004c *Phase I Cultural Resources Reconnaissance Survey of Proposed Sprint PCS Wireless Communications Facility Numbers CT-11-390-G and CT-11-390-J, North Branford, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2004d *Phase I Cultural Resources Reconnaissance Survey of Proposed AT&T Wireless Communications Facility Numbers CT-668-A and CT-668-B, Madison, Connecticut* (with William Keegan and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2004e *Historic Research and Building Documentation of the Hanford House, 180-182 Main Street, Bridgeport, Connecticut.* (with William Keegan and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2004f *Phase I Cultural Resources Survey and Archeological Inventory of a 8.09 ha (20 ac) Project Parcel Associated with the Proposed Fieldstone Commons Commercial Development, Tolland, Connecticut.* Submitted to Prospect Enterprises Hartford, Connecticut.
- 2004g *Phase I Cultural Resources Reconnaissance Survey of the Proposed Rockville Bank Branch Office Location, Tolland, Connecticut.* Submitted to Rockville Bank, South Windsor, Connecticut.
- 2004h *Phase I Cultural Resources Reconnaissance Inventory of a Proposed Housing Subdivision in Goshen, Connecticut.* Submitted to Henne Development, Southbury, Connecticut.
- 2004i *Archeological Investigation of Stone Piles Located on a 16.8 ha (41.5 ac) parcel of land in Stafford, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2005a *Phase IA Assessment and Phase IB Cultural Resources Reconnaissance Surveys of a Proposed Housing Subdivision at 25 Starrs Ridge Road in Redding, Connecticut.* Submitted to Jay Addison, Redding Connecticut.
- 2005b *Phase I Cultural Resources Reconnaissance and Assessment Surveys of the Proposed Gateway Zone Sewer Extension Project, Tolland, Connecticut.* Submitted to the Town of Tolland, Tolland, Connecticut
- 2005c *Phase I Cultural Resources Reconnaissance Survey of a Proposed Water Line in Colchester, Connecticut.* Submitted to Weston & Sampson Engineers, Inc., Rocky Hill, Connecticut.
- 2005d *Phase I Cultural Resources Reconnaissance Survey of the Proposed Carriage Crossing Housing Subdivision in Tolland, Connecticut.* Submitted to Strategic Properties, LLC, Simsbury, Connecticut.
- 2005e *Phase IA Cultural Resources Assessment Survey of the Proposed Ryder Farm Subdivision at 224 Umpawaug Road in Redding, Connecticut.* Submitted to Falciglia & Valeri Consturction, LLC, Danbury, Connecticut.

- 2005f *Phase I Cultural Resources Reconnaissance Survey of a 4.5 ha (11 ac) Proposed Project Area and Phase II National Register Testing and Evaluation of Site 165-6 in Windsor Locks, Connecticut.* Submitted to Fahey Landolino & Associates, LLC, Windsor Locks, Connecticut.
- 2005g *Phase IA Cultural Resources Assessment and Phase IB Cultural Resources Reconnaissance Surveys of the Proposed Ryder Farm Subdivision at 224 Umpawaug Road in Redding, Connecticut.* Submitted to Falciglia & Valeri Construction LLC, Danbury, Connecticut.
- 2005h *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 7 Broadway Avenue Extension, Stonington, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2005i *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 395 Round Hill Road, Greenwich, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2005j *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 135 Brandagee Avenue, Groton, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2005k *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 12 Orchard Drive, Ledyard, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2005l *Phase I Cultural Resources Reconnaissance Survey of Cellular Communications Facility CT54CX773, Hamden, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2005m *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT33XC272, Watertown, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2005n *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT70XC133, Bristol, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2005o *Phase I Cultural Resources Reconnaissance Survey of a Proposed Housing Subdivision at 80 Laurel Lane, Redding, Connecticut.* Submitted to Mr. Adam Lubarsky, Redding, Connecticut.
- 2005p *Phase I Cultural Resources Reconnaissance Survey of 2.8 ha (6.9 ac) of the Proposed Grace Estates Housing Subdivision, West Hartford, Connecticut.* Submitted to Grace Estates, LLC, West Hartford, Connecticut.
- 2005q *Phase I Cultural Resources Reconnaissance Survey of Cellular Communications Facility CT54CX773, Hamden, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

- 2005r *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 135 Brandagee Avenue, Groton, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2005s *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 395 Round Hill Road, Greenwich, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006a *Phase I Cultural Resources Reconnaissance Survey of Cellular Communications Facility CT70CX133, Bristol, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2006b *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located Within the Grounds of The Pequabuck Golf Club, Bristol, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006c *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 19 Church Street in Shelton, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006d *Phase I Cultural Resources Reconnaissance Survey of Two Proposed Cellular Communications Facility Alternatives (A & B) Located Within the Grounds of The Camp Candlewood Girl Scout Camp, New Fairfield, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006e *Phase IA Cultural Resources Assessment Survey of Proposed Cellular Communications Facility CT33XC522, Weston, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2006f *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located Along Crystal Lake Road in Ellington, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006g *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 52 Stadley Rough Road, Danbury, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006h *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CTNH357A, Watertown, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006i *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located Along Fairchild Road, Middletown, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006j *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility CTNH331B, Waterbury, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.

- 2006k *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 237 Sandy Hollow Road, Mystic, Connecticut.* Submitted to EBI Consulting, Inc., Burlington, Massachusetts.
- 2006l *Phase I Cultural Resources Reconnaissance Survey of 2.8 ha (6.9 ac) of the Proposed Grace Estates Housing Subdivision, West Hartford, Connecticut.* Submitted to Grace Estates LLC, West Hartford, Connecticut.
- 2006m *Phase I Cultural Resources Reconnaissance Survey of the Proposed Johnnycake Mews Cluster Development, Burlington, Connecticut.* Submitted to Brycorp, Inc., Burlington, Connecticut.
- 2006n *Phase I Cultural Resources Reconnaissance Survey of the Proposed Barbour Hill Substation Modification Project, South Windsor, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2006o *Phase IA Cultural resources Assessment Survey and Phase IB Cultural Resources Reconnaissance Survey of the Killingly 2G Substation Project, Killingly and Putnam, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.



DAVID R. GEORGE, M.A., R.P.A.
PROJECT MANAGER

EDUCATION

Bachelor of Science in Business Management, Ithaca College, Ithaca, New York, 1990.
Master of Arts in Anthropology, University of Connecticut, Storrs, Connecticut, 1992.
Introduction to Federal Projects and Historic Preservation Law, Section 106 Compliance, 1999.
Federal Energy Regulatory Commission, Environmental Report Preparation Seminar, 2003

ACADEMIC AWARDS AND FELLOWSHIPS

Phi Kappa Phi, 1995.
University of Connecticut Anthropology Department Research Assistantship, 1994.
University of Connecticut Anthropology Department Teaching Assistantship, 1991- 1994.
University of Connecticut Anthropology Department Pre-Doctoral Fellowship, 1992.
University of Connecticut Anthropology Department Lectureship, 1991.

PROFESSIONAL EXPERIENCE

Principal Investigator, Heritage Consultants, LLC, February 2004-Present.
Vice President-Archeological Services, Goodwin & Associates, Inc., December 2002-March 2004.
Assistant Vice President, R. Christopher Goodwin & Associates, Inc., May 2001-December 2002.
Senior Project Manager, R. Christopher Goodwin & Associates, Inc., May 2001-November 2001.
Project Manager, R. Christopher Goodwin & Associates, Inc., September 1998-May 2001.
Laboratory Supervisor/Crew Chief, Archaeological and Historical Consultants, Inc., 1996-1998.
Instructor, Department of Anthropology, University of Connecticut, Storrs, 1995-1996.
Field Director/Project Manager, Public Archaeology Survey Team, Inc., 1990-1996.
Field Technician, Office of the Connecticut State Archaeologist, 1990-1996.
Teaching Assistant, Department of Anthropology, University of Connecticut, 1991, 1994.
Field Instructor, Department of Anthropology Fieldschool, University of Connecticut, 1992-1994.

PROFESSIONAL MEMBERSHIPS

Society for American Archeology
Eastern States Archaeological Federation
Register of Professional Archeologists

SPECIAL SKILLS

Environmental Impact Statement/Environmental Assessment Report Preparation

Alternatives Analysis/Corridor Selection Studies

Existing Conditions/Disturbance Investigations

SHPO/Native American Consultation

Geographic Information Systems Applications

Faunal Analysis

Botanical Analysis

Lithic Analysis

INVITED LECTURES & PRESENTATIONS

- 1993 *Excavations at the Blakeslee House: Investigations into 18th Century Domestic Life in Wallingford, Connecticut.* Delivered at the Wallingford Public Library, Connecticut Archaeological Week.
- 1994 *Middle and Late Woodland Period Adaptations at the Cooper Site, Lyme, Connecticut.* Delivered at the Wallingford Public Library, Connecticut Archaeological Week.
- 2004 *Data Recovery Excavations at the Daniel Benton Homestead in Tolland, Connecticut.* With Catherine Labadia and David George. Presented at the Town of Tolland, Connecticut's Celebration on the Green.

A SAMPLE OF PUBLICATIONS, TECHNICAL REPORTS, AND PAPERS PRESENTED

- 1992a *The Power Plant Site: Analysis of a Paleoindian Occupation on the Mashantucket Pequot Reservation.* Prepared for the Mashantucket Pequot Tribe.
- 1992b *Report on a Phase II Archaeological Survey of Sites 85 - 6, 85 - 8, and 85 - 10. Reconstruction of State Route 111 in Monroe and Trumbull, Connecticut.* Prepared for Connecticut Department of Transportation. Public Archaeology Survey Team, Inc., Storrs.
- 1993a A Comment on the Transition to Food Production in Prehistoric Southern New England. *Archnet*. Electronic text, Homer Babbidge Library, University of Connecticut, Storrs.
- 1993b A Selected Bibliography on the Transition to Agriculture in Southern New England. *Archnet*. Electronic text, Homer Babbidge Library, University of Connecticut, Storrs.
- 1993c A Selected Bibliography on the Transition to Agriculture in the Midcontinental United States. *Archnet*. Electronic text, Homer Babbidge Library, University of Connecticut, Storrs.
- 1993d *Microscopic Identification of Faunal Remains: Problems and Prospects.* Paper presented at the 60th annual meeting of the Eastern States Archaeological Federation, Bangor, Maine.

- 1993e *The Power Plant Site: A Late Paleoindian Occupation in Ledyard, Connecticut*. Paper presented at the Spring 1993 meeting of the Albert Morgan Archaeological Society, Rocky Hill, Connecticut.
- 1993f *Report on Phase I Archaeological Reconnaissance Survey of the Great Swamp Wildlife Refuge South Kingstown, Rhode Island*. Prepared for the Rhode Island Historic Preservation Commission.
- 1993g *Report on FY 1987 Historic Restoration Fund Grant, Archaeological Investigations of Sites 72 - 41, 72 - 85, and 72 - 70B/59*. Prepared for the Mashantucket Pequot Tribe and the Connecticut Historical Commission.
- 1993h *Report on the Analysis of Faunal Materials Recovered from Excavations of a Late Woodland Occupation at the Lambert Farm Site, Warwick, Rhode Island*. Prepared for Dr. Jordan Kerber, Colgate University, New York.
- 1994a Final Report on the Analysis of Faunal Material Recovered from Archaeological Investigations of a Woodland Period Component at the Lambert Farm Site, Warwick, Rhode Island (Appendix C). In *Archaeological Investigations at the Lambert Farm Site, Warwick, Rhode Island: An Integrated Program of Research and Education by the Public Archaeology Laboratory, Inc.*, vol. I, written by J. E. Kerber (1994), pp. 167 - 183. The Public Archaeology Laboratory, Inc., Pawtucket, Rhode Island. Submitted to the Rhode Island Historical Preservation Commission, Providence.
- 1994b Thin-Section Analysis of Faunal Remains: An Internet Resource. *Archnet*. Data archive, Homer Babbidge Library, University of Connecticut, Storrs.
- 1994c *Patterns of Premaize Plant Use in the Northeast and the "Eastern Agricultural Complex."* Paper presented at the 34th annual meeting of the Northeastern Anthropological Association, Geneseo, New York.
- 1994d *Report on Phase I Archaeological Reconnaissance Survey of a Proposed CONNDOT Maintenance Facility in Fairfield, Connecticut*. Prepared for Deluew, Cather, and Company. Public Archaeology Survey Team, Inc., Storrs.
- 1995a *Late Woodland Subsistence and the Origins of Maize Horticulture in New England*. Paper presented at the 60th annual meeting of the Society for American Archaeology, Minneapolis (with Jefferey Bendremer).
- 1995b *Recognizing Variability in the Archaeobotanical Record of Late Prehistoric New England*. Paper presented at the 62nd annual meeting of the Eastern States Archaeological Federation, Wilmington, Delaware.
- 1995c *Microscopic Identifications of Archaeological Faunal Remains*. Paper presented at the 35th annual Northeastern Regional Meeting of the Geological Society of America, Cromwell, Connecticut (with Daniel Forest).
- 1995d *Report on Phase I Archaeological Reconnaissance Survey for the Reconstruction of Thompson and Avon Old Farms Road in Avon, Connecticut*. Prepared for C. R. Johnson and Associates. Public Archaeology Survey Team, Inc., Storrs.

- 1995e *Report on Phase I Archaeological Reconnaissance Survey of a Proposed CONNDOT Maintenance Facility in Woodstock, CT.* Prepared for the Connecticut Department of Transportation. Public Archaeology Survey Team, Inc., Storrs.
- 1995f *Report on Phase I Archaeological Reconnaissance Survey of a Proposed CONNDOT Maintenance Facility in Newtown, CT.* Prepared for Fuss and O'Neill. Public Archaeology Survey Team, Inc., Storrs.
- 1996a *Prehistoric Chenopodium in Connecticut: Wild, Weedy, Cultivated, or Domesticated?* Paper presented at the Symposium on Archaeobotany, New York Museum of Natural History, Albany, New York (with Robert E. Dewar).
- 1996b *Lithic and Raw Material Procurement and Use at the Late Woodland Period Cooper Site, Lyme, Connecticut.* Paper presented at the joint meeting of the Archaeological Society of Connecticut and the Massachusetts Archaeological Society, Storrs Connecticut (with Christian A. Tryon).
- 1997a A Long Row to Hoe: The Cultivation of Archaeobotany in Southern New England. *Archaeology of Eastern North America* 25:175 - 190.
- 1997b Late Prehistoric Archaeobotany of Connecticut: Providing a Context for the Transition to Maize Horticulture. *Bulletin of the Archaeological Society of Connecticut* 60:13 - 28.
- 1997c Prehistoric Archaeology of the Great Swamp Basin, South Kingstown, Rhode Island. *Bulletin of the Massachusetts Archaeological Society* 58(2):44 - 56.
- 1997d *Determining Relevancy: GIS Analysis and Land Management.* Paper presented at the annual meeting of the Council for Northeastern Historical Archaeology, Altoona, Pennsylvania (with William F. Keegan).
- 1997e *Report on Phase I Archaeological Reconnaissance Survey of the Connecticut National Guard Camp Hartell, Camp Rowland, and Stone Ranch.* Prepared for the Connecticut National Guard and the Connecticut Historical Commission. Office of the State Archaeologist, Storrs.
- 1998a *The Woodland Period of the Lower Connecticut River Valley: Recognizing Diversity in Cultural Adaptations.* Paper presented at the 63rd annual meeting of the Society for American Archaeology, Seattle.
- 1998b *Migration and the Maintenance of Cultural Integrity: The Linearbandkeramik as a Case Study.* Paper presented at the 63rd annual meeting of the Society for American Archaeology, Seattle (with Catherine Labadia).
- 1998c *Phase IB Archaeological Survey for the New Cumberland Army Depot, New Cumberland, York County, Pennsylvania.* Centre Hall, Pennsylvania: Archaeological and Historical Consultants, Inc.
- 1999a *Phase I Cultural Resources Survey and Archeological Inventory of the Sharps Relief Wells, Whitehall Relief Wells, and St. Johns Relief Wells Project Items, Concordia Parish, Louisiana.* (with William P. Athens, Susan Barrett Smith, Jeremy Pincoske, Angele Montana, and Dr. Roger Saucier). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, Vicksburg District.

- 1999b *Research Design to Guide Archeological Investigations within the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Levee Enlargement and Concrete Slope Pavement Project.* (with William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.
- 1999c *Research Design to Guide Archeological Investigations Associated with the Phase I Cultural Resources Survey and Archeological Inventory of the Proposed 9.1 km (5.6 mi) Gulfstream Natural Gas System L.L.C. 36 Inch O.D. Project in Mobile County, Alabama.* (William P. Athens, Ralph Draughon, Jeremy Pincoske, and Dave D. Davis) Submitted by R. Christopher Goodwin & Associates, Inc. to ANR Pipeline Company, Inc.
- 1999d *Research Design to Guide Archeological Investigations Associated with the Phase I Cultural Resources Survey and Archeological Inventory of the Proposed 9.1 km (5.6 mi) Gulfstream Natural Gas System L.L.C. 36 Inch O.D. Project in Jackson County, Mississippi.* (William P. Athens, Ralph Draughon, Jeremy Pincoske, and Dave D. Davis) Submitted by R. Christopher Goodwin & Associates, Inc. to ANR Pipeline Company, Inc.
- 1999e *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed 6km (3.7 mi) Southern Natural Gas Company 16 in O.D. Upson county and West Georgia Generating Meter Station Project Corridor, Upson County, Georgia.* (with Bill Athens, Ralph Draughon, Kari Krause and Jeremy Pincoske) Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 1999f *Prehistoric Chenopodium in Connecticut: Wild, Weedy, Cultivated, or Domesticated?* (with Robert E. Dewar) (*Current Northeast Paleoethnobotany*, edited by J. Hart, New York State Museum).
- 1999g Prehistoric Floral and Faunal Use in Connecticut. In *Connecticut Archaeology*, edited by William Keegan and Kristen Keegan. University of Connecticut Press, Storrs.
- 1999h *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed 9.1 km (5.6 mi) Gulfstream Pipeline Project Corridor, Jackson County, Mississippi.* (with William P. Athens, Ralph Draughon, Jr., Jeremy Pincoske, and Dave D. Davis) Submitted by R. Christopher Goodwin & Associates, Inc. to ANR Pipeline Company, Inc.
- 1999i *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Gulfstream Natural Gas System L.L.C. 36 Inch O.D. Project in Mobile County, Alabama.* (with William P. Athens, Ralph Draughon, Jr., Jeremy Pincoske, Cathy Labadia, and Dave D. Davis) Submitted by R. Christopher Goodwin & Associates, Inc. to ANR Pipeline Company, Inc.
- 1999j *Phase II Archeological Testing and National Register Evaluation for Four Archeological Sites (16BO400, 16CD87, 16CD235, and 16CD239) within the Area of Potential Effect of the Pool 5 Impoundment Area, Bossier and Caddo Parishes, Louisiana* (with Luis Williams, Rebecca Johnson and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, Vicksburg District.

- 1999k *Cultural Resources Survey and Inventory, Florida Gas Transmission Phase V Expansion, Gulf Power Lateral, Palmetto Power Lateral, Loop C, Loop D, Loop E, Loop G, Loop H St. Petersburg Lateral, Loop I St. Petersburg Lateral, Jacksonville Loop, and FP&L Lateral.*(with Catherine Labadia, Jeremy Pincoske, Susan Barrett Smith, Ralph B. Draughon, Jr., Charlene Keck, Colleen Hanratty, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission.
- 1999l *Cultural Resources Study Supporting Supplement I to the Final Environmental Impact Statement, Mississippi River Main Line Levee.* (with Dr. Roger Saucier, Susan Barrett Smith, Jeremy Pincoske, William Hayden, Rebecca Johnson, Ryan Crutchfield, William Barr, and William P. Athens.) Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2000a *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 71 (Greenwood Highway) Expansion Corridor from State Road 10 (US 90) to North of the City Limits of Greenwood, in Jackson County, Florida.* (with Catherine Labadia, Katy Coyle, James Hollingsworth, Kari Krause, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens.) Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.
- 2000b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company (SNG) SCPL-Urquhart Plant Meter Station, Aiken County, South Carolina.* (with Patrick P. Robblee, Colleen Hanratty, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2000c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company (SNG) South System Expansion Project, Sumter, Perry, Dallas, Autauga, Tallapoosa, Macon, and Lee Counties, Alabama.* (with Patrick P. Robblee, Ralph B. Draughon, Jr., James M. Hollingsworth, Kelley Beavers, Colleen Hanratty, Caroline Wardlaw, and William P. Athens. Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.
- 2000d *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Tennessee Gas Pipeline Company Mississippi 500 Line Expansion Project, Forrest, Jones, Clarke, and Jasper Counties, Mississippi.* (with Ralph B. Draughon, Jr., Kari Krause, Jeremy Pincoske, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to Northern Ecological Associates, Inc. and Tennessee Gas Pipeline Company.
- 2000e *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed 19.3 km (12 mi) Long Stretch of Bayou Teche, Iberia Parish, Louisiana.* (with Kari Krause, Katy Coyle, Jeremy Pincoske, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2000f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed 44.6 ha (110.3 ac) Duke Energy North America Enterprise Energy Facility, Clarke County, Mississippi* (with Darryl Byrd, Ralph B. Draughon, Jr., Jeremy Pincoske, Kristin Vanwert, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to ENSR Consulting & Engineering.

- 2000g *Phase I Cultural Resources Survey and Archeological Inventory of the 4.94 ha (12.21 ac) Keystone Lock and Dam Project Parcel, St. Martin Parish, Louisiana* (with Kari Krause, Meredith Snead, Katy Coyle and William P. Athens.) Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2000h *Phase I Cultural Resources Survey and Archeological Inventory of Two Pipeline Loops (Loop J and Loop K) and 10 Ancillary Use Facilities Associated with the Proposed Florida Gas Transmission Phase V Expansion, FGT Mobile Bay Lateral, Loop A, and Loop B, Gilchrist and Levy Counties, Florida* (with Catherine Labadia, Susan Barrett Smith, David Roth, Kristin Vanwert, James Eberwine, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.
- 2000i *Historical Research and Remote Sensing of the Former Location of the Brazier Baptist Church and Cemetery Complex (Site 16IV49), Iberville Parish, Louisiana* (with Katy Coyle, Kari Krause, Susan Barrett Smith, Ralph Draughon, Jr., James Eberwine, J.B. Pelletier, William Lowthert, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2000j *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Petal Gas Storage Pipeline Project, Forrest, Jones, Clarke and Jasper Counties, Mississippi* (with Kari Krause, Ralph Draughon, Jr., Jeremy Pincoske, and William P. Athens) Submitted by R. Christopher Goodwin & Associates, Inc. to Northern Ecological Associates, Inc.
- 2000k *Phase II Archeological Testing and National Register Evaluation of Four Archeological Sites (16BO400, 16CD87, 16CD235, and 16CD239) Within the Area of Potential Effect of the Pool 5 Impoundment Area, Bossier and Caddo, Parishes, Louisiana* (with William P. Athens, Susan Barrett-Smith, Luis Williams, Rebecca Johnson, and Ralph Draughon, Jr.). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, Vicksburg District.
- 2000l *Phase I Cultural Resources Survey And Archeological Inventory Of The Proposed 7.56 KM (4.7 MI) 36 Inch O.D. Gulfstream Pipeline Project Corridor, Mobile County, Alabama* (with William P. Athens, Cathy Labadia, Ralph Draughon, Jr., Jeremy Pincoske, Dave D. Davis). Submitted by R. Christopher Goodwin & Associates, Inc. to Gulfstream Natural Gas System, L.L.C.
- 2001a *Phase II National Register Testing and Evaluation of Nine Archeological Sites 22CO573, 22CO726, 22CO773, 22CO774, 22CO775, 22CO776, 22CO777, 22CO778, and 22CO781, Coahoma County, Mississippi* (with Jim Strait, Ralph Draughon, Jr., Jeremy Pincoske, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Mississippi Department of Transportation, Jackson, Mississippi.
- 2001b *Remote Sensing and Ground-Truthing Investigations at Site 40SW319, Stewart County, Tennessee* (with Sean Coughlin, Meg Thornton, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to URS Corporation.
- 2001c *Phase I Cultural Resources Survey and Archeological Inventory Conducted at the Proposed Aiken Meter Station Facility Expansion, Aiken, South Carolina* (with Catherine Labadia, and Kari Krause). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

- 2001d *Archeological Testing of the Former Location of the Braziel Baptist Church and Cemetery Complex (Site 16IV49) Iberville Parish, Louisiana.* (with Katy Coyle, Kristen Vanwert and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2002a *Phase I Cultural Resources Survey and Archeological Inventory of the Tennessee Portion of the Proposed Colonial Pipeline Project Corridor, Lincoln, Marshall, Bedford, Rutherford, and Davidson Counties, Tennessee* (with Alicia Ventresca, Katy Coyle, Jeremy Pincoske, Kari Krause and, William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Colonial Pipeline Company.
- 2002b *Phase I Cultural Resources Survey and Archeological Inventory of the Alabama Portion of the Proposed Colonial Pipeline Project Corridor, Talladega, Calhoun, St. Clair, Blount, Cullman, Marshall, Morgan, Madison, and Limestone Counties, Alabama* (with Catherine Labadia, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, Kari Krause and, William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Colonial Pipeline Company.
- 2002c *Phase I Cultural Resources Survey and Archeological Inventory of the Segura Staging Area, Iberia Parish, Louisiana* (with Sean Coughlin, Katy Coyle, Jeremy Pincoske, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.
- 2002d *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Liquefied Natural Gas (SLNG) Elba Island Expansion Project in Chatham County, Georgia* (with William P. Athens, Kari Krause, Sean Coughlin, Alicia Ventresca, Katy Coyle, Andrew Ivester, Catherine Labadia, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy Corporation.
- 2002e *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Liquefied Natural Gas Wetland Creation Project on Elba Island, Chatham County, Georgia* (with William P. Athens, Kari Krause, Sean Coughlin, Alicia Ventresca, Katy Coyle, Andrew Ivester, Catherine Labadia, Jeremy Pincoske,). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy Corporation.
- 2002f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 79 Expansion Project Through Portions of Washington and Holmes Counties, Florida* (with William P. Athens, Rebecca Sick, Cathy Labadia, Katy Coyle, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to FDOT, District III.
- 2002g *Phase I Cultural Resources Survey and Archeological Inventory of the Tennessee Portion of the Proposed Colonial Pipeline Project Corridor, Lincoln, Marshall, Bedford, Rutherford, and Davidson Counties, Tennessee* (with William P. Athens, Alicia Ventresca, Eric Vogelheim, Kristen Vanwert, Darryl Byrd, Katy Coyle, Jeremy Pincoske, Kari Krause). Submitted by R. Christopher Goodwin, Inc. to Colonial Pipeline Company.
- 2002h *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Tennessee Gas Pipeline Company Hognose Creek Crossing, Lauderdale County, Mississippi* (with William P. Athens, Eric Vogelheim, Jeremy Pincoske, Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to ENSR.

- 2002i *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Tennessee Gas Pipeline Company Tallahala Creek Crossing Project Area, Forrest County, Mississippi* (with William Athens, Alicia Ventresca). Submitted by R. Christopher Goodwin & Associates, Inc. to ENSR.
- 2002j *Phase II Archeological Testing and National Register Evaluation of Four Archeological Sites (16BO400, 16CD87, 16CD235, and 16CD239) Within the Area of Potential Effect of the Pool 5 Impoundment Area, Bossier and Caddo Parishes, Louisiana* (with William P. Athens, Luis Williams, Rebecca Johnson, Susan B. Smith, Ralph Draughon, Jr.). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, Vicksburg District.
- 2002k *Phase II National Register Testing and Evaluation of Sites 22LW616, 22LW617, 22LW618, 22LW619, 22LW620, 22LW621, and 22LW622, Lawrence County, Mississippi* (with William P. Athens, Kari Krause, Rebecca Sick, Catherine Labadia, Katy Coyle, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to MDOT.
- 2002l *Phase I Cultural Resources Survey and Archeological Inventory of the Sharps Relief Wells, Whitehall Relief Wells, and St. Johns Relief Wells Project Items, Concordia Parish, Louisiana* (with William P. Athens, Susan Barrett Smith, Jeremy Pincoske, Angele Montana, Dr. Roger Saucier). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, Vicksburg District.
- 2002m *Land Use History of the Proposed Bayou Rigaud Dredging and Marsh Creation Areas, Jefferson Parish, Louisiana* (with William P. Athens, Susan Barrett Smith, Katy Coyle, Erin Thompson). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.
- 2003a *Phase II National Register Testing and Evaluation of Sites 16CA114 and 16CA115, Caldwell Parish, Louisiana* (with William P. Athens, Catherine Labadia, James Eberwine, Andrea White, Heather Backo). Submitted by R. Christopher Goodwin & Associates, Inc. to Denmon Engineering, Inc.
- 2003b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed TAMKO Pipeline Project, Tuscaloosa County, Alabama* (with William P. Athens, Jeremy Pincoske, Andrea White, Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to ENSR.
- 2003c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Coosa River Horizontal Directional Drill (HDD) Project, Elmore County, Alabama* (with William P. Athens, Alicia Ventresca, Jeremy Pincoske, Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy.
- 2003d *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida* (with William P. Athens, Cathy Labadia, Eric Vogelheim, Katy Coyle, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.

- 2003e *Phase IA Cultural Resources Records Review Associated with Two Proposed Project Parcels in Corpus Christi, Texas and Mobile, Alabama* (with Bill Athens, Kari Krause, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to ERM.
- 2003f *Phase I Cultural Resources Survey and Archeological Inventory of Two Parcels of Land Associated with the Frenchman's Bend Subdivision Project, Ouachita Parish, Louisiana* (with Bill Athens, Kari Krause, Katy Coyle, Heather Backo, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Trey Jay, Inc.
- 2003g *Phase I Cultural Resources Survey and Archeological Inventory of Four Project Areas Associated with the Proposed Discovery Market Expansion Project, Lafourche and Terrebonne Parishes, Louisiana* (with Bill Athens, Kari Krause, Katy Coyle, Heather Backo, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Discovery Gas Transmission LLC.
- 2003h *Phase I Cultural Resources Survey and Archeological Inventory of a Proposed 1.12 ha (2.78 ac) Borrow Pit and an Associated Access Road, Ascension Parish, Louisiana* (with Catherine Labadia, Marie Pokrant, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.
- 2003i *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Replacement and Relocation of the 24-inch O.D. South Main Loop Line, Marengo County, Alabama* (with William P. Athens, Andrea White, and Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Corporation.
- 2003j *Phase I Cultural Resources Survey and Archeological Inventory of an 8.94 ha (22.09 ac) Parcel of Land, Windsor Locks, Connecticut* (with Andrea White). Submitted by R. Christopher Goodwin & Associates, Inc., to ATC Associates, Inc.
- 2003k *Phase I Cultural Resources Survey and Archeological Inventory of a Proposed Cellular Telephone Tower and Associated Access Road in Chaplin, Connecticut*. Submitted by R. Christopher Goodwin & Associates, Inc., to Keegans Associates, LLC (work completed on behalf of Vanasse Hangen Brustlin, Inc.).
- 2003l *Phase IB Cultural Resources Survey and Archeological Inventory of a 16.2 ha (40 ac) Project Parcel Rocky Hill, Connecticut* (with Catherine Labadia and Andrea White). Submitted by R. Christopher Goodwin & Associates, Inc., to Vanasse Hangen Brustlin, Inc.
- 2003m *Phase I Cultural Resources Survey and Archeological Inventory of 30 and 36 inch Outside Diameter (O.D.) Lake Charles Express Pipeline Project, Allen, Beauregard, Calcasieu, and Jefferson Davis Parishes, Louisiana* (with Kari Krause, Katy Coyle, Jeremy Pincoske, Eric Vogelheim, Jennae Biddiscombe). Submitted by R. Christopher Goodwin & Associates, Inc., to Lake Charles Express LLC.
- 2003n *Phase I Cultural Resources Survey and Archeological Inventory of the Chaland Headland Restoration Project, Plaquemines Parish, Louisiana* (with William P. Athens, Catherine Labadia, and Rebecca Sick). Submitted by R. Christopher Goodwin & Associates, Inc., to Tetra Tech EM, Inc.

- 2003o *Phase I Cultural Resources Survey and Archeological Inventory of a 6.75 ha (16.69 ac) Parcel of Land Located in Killingly, Connecticut* (with Andrea White). Submitted by R. Christopher Goodwin & Associates, Inc. to Geisser Engineering Corporation.
- 2003p *Phase II Testing and Evaluation of Site 16JE2 in Conjunction with Construction of the Proposed Endymion Pipeline LLC (Grand Isle to Clovelly) Project Corridor, Jefferson and Lafourche Parishes, Louisiana* (with William P. Athens, Sean Coughlin, and Rebecca Sick). Submitted by R. Christopher Goodwin & Associates, Inc. to T. Baker Smith & Son, Inc.
- 2003q *Phase 1A Literature Search and Records Review of a Proposed 60.5 ha (149.6 ac) Parcel of Land, Hollinger's Island, Mobile County, Alabama* (with William P. Athens, Kari Krause, Jeremy Pincoske, and Ashley Sanders). Submitted by R. Christopher Goodwin & Associates, Inc. to Environmental Resources Management.
- 2003r *Phase 1A Literature Search and Records Review of a Proposed 23.3 km (14.5 mi) Long, 36 in O.D. Exxon Mobile Pipeline Corridor, Mobile County, Alabama* (with William P. Athens, Kari Krause, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Environmental Resources Management.
- 2003s *Phase 1A Cultural Resources Records Review for the Proposed Corridor X to Muscle Shoals Project, Colbert, Franklin, Lawrence, Marion, Walker, and Winston Counties, Alabama* (with William P. Athens and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.
- 2004a *Phase 1A Cultural Resources Overview and Assessment of Previously Recorded Cultural Resources Within and Adjacent to the Proposed Golden Pass LNG Terminal, Jefferson County, Texas* (with William P. Athens, Rebecca Sick, and Andrea White). Submitted by R. Christopher Goodwin & Associates, Inc. to Environmental Resources Management, Inc.
- 2004b *Phase 1A Cultural Resources Records Review and Literature Research of the Paul J. Rainey Wildlife Sanctuary, Vermilion Parish, Louisiana* (with William P. Athens, Catherine Labadia, and Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to Tetra Tech EM, Inc.
- 2004c *Phase I Cultural Resources Reconnaissance Survey of Proposed Sprint PCS Wireless Communications Facility Numbers CT-11-390-G and CT-11-390-J, North Branford, Connecticut* (with Catherine Labadia and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
- 2004d *Phase I Cultural Resources Reconnaissance Survey of Proposed AT&T Wireless Communications Facility Numbers CT-668-A and CT-668-B, Madison, Connecticut* (with Catherine Labadia and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
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- 2005e *Phase IA Cultural Resources Assessment Survey of the Proposed Ryder Farm Subdivision at 224 Umpawaug Road in Redding, Connecticut.* Submitted to Falciglia & Valeri Construction, LLC, Danbury, Connecticut.
- 2005f *Phase I Cultural Resources Reconnaissance Survey of a 4.5 ha (11 ac) Proposed Project Area and Phase II National Register Testing and Evaluation of Site 165-6 in Windsor Locks, Connecticut.* Submitted to Fahey Landolino & Associates, LLC, Windsor Locks, Connecticut.
- 2005g *Phase IA Cultural Resources Assessment and Phase IB Cultural Resources Reconnaissance Surveys of the Proposed Ryder Farm Subdivision at 224 Umpawaug Road in Redding, Connecticut.* Submitted to Falciglia & Valeri Construction LLC, Danbury, Connecticut.
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- 2006o *Phase IA Cultural resources Assessment Survey and Phase IB Cultural Resources Reconnaissance Survey of the Killingly 2G Substation Project, Killingly and Putnam, Connecticut.* Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.



WILLIAM F. KEEGAN, B.A., A.B.T.
Historical Geographer & GIS Specialist

EDUCATION

Bachelor of Arts in Anthropology and Geography, University of Connecticut, Storrs, 1996

Master of Arts Candidate in Geography, University of Connecticut, Storrs (all but thesis)

Certificate in Geographic Information Systems, University of Connecticut, Storrs (application pending)

PROFESSIONAL EXPERIENCE

Partner, Heritage Consultants, LLC, February 2004 - Present

Partner, Keegans Associates, LLC, April 1997 - April 2004

Teaching Assistant, Department of Geography, University of Connecticut, Storrs, 2000-2001

Professional Memberships

Archeological Society of Connecticut

Northeast Arc Users Group

Council for Northeastern Historic Archaeology

Special Skills

Geographic Information Systems

Cartography

Archival, Cartographic, and Historical Research

Invited Lectures and Public Presentations

- 1994a *Census Records as a Source for Archeological Research.* Archeological Society of Connecticut.
- 1994b *Reconstructing the Enfield Shaker Site Through Census Records.* Annual Meeting of the Sons of the American Revolution, Connecticut.
- 1995a *The Enfield Shakers: Industry and Archaeology.* Boston Area Shaker Study Group.
- 1995b *Industry and Archaeology at the Shaker Village in Enfield.* Wadsworth Athenaeum, Hartford, Connecticut; associated with the exhibition *Shaker: The Art of Craftsmanship.*
- 1996 *Industry and Archaeology at the Shaker Village in Enfield.* East Granby Historical Society.

- 1997 *GIS Applications in Archaeology: Connecticut National Guard Project.* Conference for Northeast Archaeology, Altoona, Pennsylvania.
- 1998 *Archeological Site Locations and Characteristics in the Connecticut River Valley.* Prepared with Nicholas Bellantoni, Conn. State Archaeologist. Archeological Societies of Connecticut and Massachusetts.
- 1999 *Residence Patterns of Nineteenth Century Industrial Workers in Hartford, Connecticut.* Annual Northeast ARC Users Conference.
- 2001 *Planning for the Future, Dealing with the Past.* Annual meeting of the Connecticut Chapter of the American Planning Association.
- 2003 *Survey Methods and Results: Cultural Resources Along the Appalachian Trail in Connecticut.* With Nicholas Bellantoni, Connecticut State Archaeologist, and Kristen N. Keegan. Biannual meeting of the Appalachian Trail Conference.
- 2004a *Cultural Resources Along the Appalachian Trail in Connecticut: Survey Methods and Results.* With Nicholas Bellantoni, Connecticut State Archaeologist, and Kristen N. Keegan. Annual Meeting of the Society of American Anthropologists, Montreal.
- 2004b *Cultural Resources Along the Appalachian Trail in Connecticut: Survey Methods and Results.* With Nicholas Bellantoni, Connecticut State Archaeologist, and Kristen N. Keegan. Annual Meeting of the Archeological Society of Connecticut.
- 2004c *Data Recovery Excavations at the Daniel Benton Homestead in Tolland, Connecticut.* With Catherine Labadia and David George. Presented at the Town of Tolland, Connecticut Celebration on the Green.

A Sample of Publications, Technical Monographs, and Research Projects

- 1995a Illustration maps in *Achieving Racial Balance: Case Studies of Contemporary School Desegregation* by Sondra Astor Stave. Contributions to the Study of Education, Number 65. Westport, Connecticut: Greenwood Press.
- 1995b History and Geography of the Enfield Shaker Community, Enfield, Connecticut. Research reports prepared for Office of State Archaeology.
- 1995c History and Geography of the Meriden School for Boys Cemetery, Meriden, Connecticut. Research reports prepared for the Office of State Archaeology.
- 1995d History of the Huntington Family Home, Scotland, Connecticut. Research reports prepared for Dr. Harold Juli of Connecticut College.
- 1997a History and Geography of Ashford project area (archeological reconnaissance survey). Prepared for Archeological Research Specialists.
- 1997b History and Geography of Wolf Rocks project area, Rhode Island (archeological reconnaissance survey). Prepared for Archeological Research Specialists.

- 1998a Illustration maps in *The Boys From Rockville*, Robert L. Bee, ed. Knoxville, Tennessee: University of Tennessee Press.
- 1998b *Historical and Cultural Reconnaissance Survey, Cultural Resource Management Plan, Connecticut National Guard Properties, Camp Rowland, Camp Hartell, Stone's Ranch* [Windsor Locks, East Lyme, and Lyme, Connecticut]. Prepared for the Office of Connecticut Archaeology.
- 1998c *Camp Rowland Historical Report: An Overview of Town History, Military History, and Landholdings* [East Lyme, Connecticut]. Prepared for Archeological Research Specialists, Inc. and United International Corporation.
- 1998d Preparation of GIS map series for use in Route 11 archeological reconnaissance survey, Connecticut. Prepared for PAST, Inc.
- 1998e Development of GIS data layer of open space in the Town of Willington, Connecticut. Prepared for Town of Willington.
- 1999a Contributing co-editor, *The Archaeology of Connecticut: The Human Era, 11,000 Years Ago to the Present*. Storrs, Connecticut: Bibliopola Press; Hanover, NH: New England University Press.
- 1999b Historical materials in *Phase I Archeological Reconnaissance Survey, Long Lane School, Middletown, Connecticut*. Prepared for PAST Inc.
- 1999c Historical and cartographic research reports for archeological surveys in Seymour and Killingworth, Connecticut. Prepared for American Cultural Specialists, Inc.
- 1999d Development of GIS data layers of Hartford architectural resources. Prepared for Connecticut Historical Commission.
- 1999e Cartographic research in support of archeological survey of Adriaen's Landing Development, Hartford, Connecticut. Prepared for PAST, Inc.
- 1999f Historical research and mapping of General Rochambeau march routes in Connecticut. Prepared for PAST, Inc.
- 1999g Cartographic research on property of Talcott Mountain Science Center, Avon, Connecticut. Prepared for Talcott Mountain Science Center.
- 2000a Archeological Reconnaissance Survey: Cell Tower Connecticut33XC021-3 (located south of Bull Road and west of Plymouth Road), Harwinton, Connecticut. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2000b Historical and cartographic research reports for archeological surveys in Glastonbury, Newtown, and Windham, Connecticut. Prepared for American Cultural Specialists, Inc.
- 2000c Development of GIS data layers of cultural resource locations in East Hartford, Connecticut. Prepared for Town of East Hartford, Connecticut.

- 2000d Cartographic research on Newtown and Monroe town boundary. Prepared for Surveying Associates, P.C.
- 2001a *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 33XC108-2, Goshen, Connecticut (416 Old Middle Street)*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2001b *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 33XC024-5 (located east of Looking Glass Hill Road), Litchfield, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2001c *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 33XC024-4, Litchfield, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2001d *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 33XC572-3, Woodstock, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2001e *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 54XC704, Voluntown, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002a *Archeological Investigations at Herindeen Landing, Woodstock, Connecticut*. Prepared for Marc Banks.
- 2002b *Archeological Reconnaissance Survey: Fitts Road Cell Tower Site, Ashford, Connecticut*. Prepared for Tower Ventures, Inc.
- 2002c *Archeological Reconnaissance Survey: Sprint PCS Cell Tower Site #Connecticut 33XC087-2 (located off of Rockland Road), Guilford, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002d *Archeological Reconnaissance Survey: 72 Boggy Hole Road Cell Tower Site, Old Lyme, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc. and Wireless Solutions LLC.
- 2002e *Archeological Reconnaissance Survey: Sprint PCS Site #Connecticut 33XC612 (located at 576 Hamburg Road), Lyme, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002f *Archeological Reconnaissance Survey, 148 Roberts Street Cell Tower Site, East Hartford, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002g *Archeological Reconnaissance Survey: Farmstead Acres Project, New Milford, Connecticut*. Prepared for Artel Engineering Group.
- 2002h *Archeological Reconnaissance Survey: Sprint PCS #Connecticut 54XC702A, Sprint PCS #54XC702B, Plainfield, Connecticut*. Prepared for Apex Environmental, Inc.
- 2002i *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 54XC771, Woodbury, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002j *Archeological Reconnaissance Survey: Spring Cell Tower #Connecticut 33XC613-D (located at 97 Chaplain Road), Eastford, Connecticut*. Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002k *Archeological Reconnaissance Survey: Cell Tower Site Connecticut 33XC587 (located at 175 Dibble Hill Road), Cornwall, Connecticut*. Prepared for Vanasse, Hangen, Brustlin, Inc.

- 2002l *Archeological Reconnaissance Survey: Cell Tower Connecticut-266.2, Monroe, Connecticut.* Prepared for GeoTrans, Inc.
- 2002m *Archeological Reconnaissance Survey: Liberty Croft Estates (located at Broadway and Joshua Lane), Coventry, Connecticut.* Prepared for Gardner & Peterson.
- 2002n *Archeological Reconnaissance Survey: Telecommunications Tower, #Connecticut-01513, Brooklyn, Connecticut.* Prepared for Tower Ventures, Inc.
- 2002o *Archeological Reconnaissance Survey: Cell Tower #Connecticut54XC717, Southbury, Connecticut.* Prepared for Vanasse, Hangen, Brustlin Inc.
- 2002p *Phase I Archeological Reconnaissance Survey for Stone's Ranch, East Lyme, Connecticut.* Prepared for Maguire Group, Inc.
- 2002q *Cartographic research for archeological reconnaissance survey of Goodspeed Opera House Expansion, East Haddam, Connecticut.* Prepared for American Cultural Specialists, Inc.
- 2002r *Archeological Reconnaissance Survey: Cell Tower Connecticut-462.3, Killingly, Connecticut.* Prepared for GeoTrans, Inc.
- 2003a *Archeological Reconnaissance Survey: Cell Tower Site Connecticut33XC577 (located at 165 South Main Street), Marlborough, Connecticut.* Prepared for Vanasse, Hangen, Brustlin, Inc.
- 2003b *Phase IA Reconnaissance Survey: Cell Tower Site Connecticut092, 370 North Avenue, Bridgeport, Connecticut.* Prepared for GeoTrans, Inc.
- 2003c *Phase IA Reconnaissance Survey: Cell Tower Connecticut11-307C, 82 Mechanic Street, Stonington, Connecticut.* Prepared for Lessard Environmental, Inc.
- 2003d *Archeological Reconnaissance Survey: Unnamed Wireless Communications Equipment Site, 496 Box Hill Road, Vernon, Connecticut.* Prepared for Vanasse, Hangen, Brustlin, Inc.
- 2003e *Archeological Reconnaissance Survey: Sprint Site #Connecticut33XC271 (170 Southeast Road, east of Spencer Road), New Hartford, Connecticut.* Prepared for Vanasse, Hangen, Brustlin, Inc.
- 2003f *Archeological Reconnaissance Survey: Sprint PCS Cell Tower #Connecticut33XC579, Farmington, Connecticut.* Prepared for Vanasse, Hangen, Brustlin, Inc.
- 2003g *Phase I Archeological Reconnaissance Survey: Connecticut-11-357C (cell phone tower site on the west side of Umpawaug Road, 500 feet east of the Saugatuck River), Redding, Connecticut.* Prepared for Vanasse, Hangen, Brustlin, Inc.
- 2003h *Phase I Archeological Reconnaissance Survey: Connecticut33XC583 (cell tower site located south of Palmer Road, midway between the villages of Chaplin and South Chaplin), Chaplin, Connecticut.* Prepared for Vanasse, Hangen, Brustlin, Inc.
- 2003i *Archeological Reconnaissance Survey: Knowlton Farm Cell Tower Site, Ashford, Connecticut.* Prepared for Tower Ventures, Inc.

- 2003j *Preliminary Phase IA Archeological Reconnaissance Survey of Property on Westcott Road, Killingly, Connecticut.* Prepared for Clough, Harbour & Associates.
- 2003k Historical Research and Reporting and GIS services for ATC project in Windsor Locks, Connecticut. Prepared for R. Christopher Goodwin & Associates, Inc.
- 2004a *Phase Ia Cultural Resource Sensitivity Assessment: Proposed Valley Road Development, Killingly, Connecticut.* Prepared for R. A. Daddario Builders.
- 2004b *Archeological Reconnaissance Survey: Moosup Pond Sewer Project, MGI No.: 15892, Phase IA and Phase IB, Plainfield, Connecticut.* Prepared for Maguire Group, Inc.
- 2004c *Phase I Cultural Resources Reconnaissance Survey of Proposed Sprint PCS Wireless Communications Facility Numbers CT-11-390-G and CT-11-390-J, North Branford, Connecticut* (with Catherine Labadia and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.
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